

## THE IMPACT OF LEADER EYE GAZE ON DISPARITY IN MEMBER INFLUENCE: IMPLICATIONS FOR PROCESS AND PERFORMANCE IN DIVERSE GROUPS

SO-HYEON SHIM

The University of Hong Kong

ROBERT W. LIVINGSTON

Harvard University

KATHERINE W. PHILLIPS

Columbia University

SIMON S. K. LAM

The University of Hong Kong

One important benefit of teamwork is the exchange and integration of diverse knowledge, experience, and opinions group members bring to the table. However, demographic attributes—such as race, gender, and functional background—may create asymmetric influence patterns between group members in diverse groups because these demographic characteristics are often associated with status differences. In the current research, we examine how to attenuate this disparity in member influence in diverse groups by focusing on the role of a leader's gazing behavior. Across two studies, we found that asymmetric influence patterns in which high-status members tend to wield greater influence in group decision-making processes were attenuated when a leader increased their visual attention toward low-status members in the group. This reduced disparity in member influence which in turn improved group information elaboration and group performance in a collective decision-making task. Theoretical and practical implications for leaders' visual attention, diversity, group decision-making processes, and group performance are discussed.

Organizations have become increasingly diverse over the years (van Knippenberg & Schippers, 2007; van Veelen & Ufkes, 2019). Accordingly, it is common for group members to work with colleagues who differ from them in terms of their demographic attributes (Chattopadhyay, George, & Ng, 2011; Mayo, van Knippenberg, Guillén, & Firfiray, 2016). Although diversity in the workplace is considered beneficial, differences among employees can create challenges (Kulik, Perera, & Cregan, 2016; van Veelen & Ufkes, 2019).

Consider three types of diverse groups: a surgical team comprised of members with different functional backgrounds (e.g., surgeons and nurses), a research team comprised of members of different ages or tenures (e.g., senior and junior professors),

and an engineering team comprised of members of different genders (e.g., male and female engineers). Both status characteristics and the relational demography literature have suggested that members' demographic characteristics tend to shape status differentials, such that surgeons, senior professors, and male engineers, for example, are often perceived as having higher status (e.g., Berger, Rosenholtz, & Zelditch, 1980; Bunderson, 2003; Chattopadhyay et al., 2011; Ridgeway, 1991). More importantly, status differentials among group members can lead to the creation of asymmetric influence patterns, which means that in diverse groups, high-status members tend to wield greater influence (e.g., Ridgeway & Berger, 1986; Ridgeway & Correll, 2006). Specifically, higher-status members, such as surgeons, are likely to lead discussions and make important decisions, whereas lower-status members, such as nurses, are likely to defer to others (Berger & Zelditch, 1985; Ridgeway & Walker, 1995).

---

So-Hyeon Shim is serving as corresponding author for this article.

This asymmetric influence pattern may prove problematic, especially in collective decision-making tasks, as it may disrupt the elaboration of task-relevant information that group members bring to the table and diminish optimal group performance. In a surgical team, if lower-status members do not speak up about issues based on their own expertise, the team will forego opportunities to integrate diverse opinions and information (Homan, van Knippenberg, Van Kleef, & De Dreu, 2007). This may prevent the team from providing optimal care to patients. NASA's Challenger tragedy reflects the negative effects of asymmetric influence patterns within a group. Although engineers at NASA opposed the launch of the Challenger shuttle, they did not object firmly enough to stop managers who favored the launch (Antonsen, 2009; Garrett, 2004; Schwartz, 1987). Given that asymmetric influence patterns may lead to suboptimal decisions and organizational failures, it is critical to understand how to attenuate these patterns.

Despite the importance of reducing asymmetric influence patterns among group members, how best to accomplish this remains unclear. Although numerous studies have indicated that diversity often leads to differences in influence because of the demographic dissimilarities inherent in diverse groups (Harrison & Klein, 2007; Kilduff & Galinsky, 2013), diversity researchers have not directly investigated this inequality of influence in such groups (Chattopadhyay, George, Li, & Gupta, 2020; Phillips, Rothbard, & Dumas, 2009). Our failure to understand the significance of this phenomenon hinders scholars' ability to identify and develop interventions that will attenuate asymmetric influence patterns. How can we shift these patterns of unequal influence among members, thereby enhancing group information elaboration and performance in collective decision-making tasks?

To address this deficiency, we examine how to attenuate asymmetric influence between members of diverse groups by focusing on the role of a leader's nonverbal behavior. Specifically, we investigate the role of a leader's *eye gaze* or *visual attention* as an influential nonverbal element that contributes to changes in asymmetric influence patterns. Many leadership studies have argued that leaders' communication styles significantly influence group outcomes (e.g., Nishii & Mayer, 2009; Zaccaro, Rittman, & Marks, 2001). According to the literature on nonverbal behavior, while the content of a leader's verbal communication is important, nonverbal cues are often more influential (Bonaccio, O'Reilly, O'Sullivan, & Chiocchio, 2016; Hall, Bernieri, & Carney,

2005). Indeed, scholars in the areas of communication and psychology have found that between 65% and 90% of all daily communication is nonverbal (Matsumoto, Frank, & Hwang, 2013; Sooriya, 2017). A quote from Sapir (1949) characterizing nonverbal behavior as "an elaborate secret code that is written nowhere, known by none, and used by all" (as quoted in Hall et al., 2005: 240) reflects the ubiquitous role of nonverbal behavior in communications. Moreover, when verbal cues contradict nonverbal cues, people tend to trust the latter over the former (Remland, 1981).

As one of the most potent forms of nonverbal behavior, eye gaze elicits the attention of others during social interactions (Argyle, 2013; Birmingham, Bischof, & Kingstone, 2008; Ohlsen, van Zoest, & Van Vugt, 2013). Wirth, Sacco, Hugenberg, and Williams (2010: 869) have argued that gazing is a fundamental human trait in which individuals spontaneously engage during social interactions: "when we look at the faces of others, we tend to look first and most frequently at their eyes." This tendency to be sensitive to the eye gaze of others is particularly salient in leader-follower relationships, where followers—both human and nonhuman species—automatically cue into a leader's visual attention during interactions (Foulsham, Cheng, Tracy, Henrich, & Kingstone, 2010; Ohlsen et al., 2013; Van Vugt, Hogan, & Kaiser, 2008). For example, macaque monkeys selectively follow the direction of a high-status monkey's gaze (Ohlsen et al., 2013), and human infants instinctively monitor and follow the direction of adults' visual attention very early in life (Frischen, Bayliss, & Tipper, 2007).

By following the direction of leaders' eye gaze, followers engage in observational learning within their environment (Emery, 2000; Shepherd, 2010). For instance, individuals tend to be alert to objects that receive a leader's attention in a negative manner (Emery, 2000). Biologists and cognitive scientists have long argued that following the direction of leaders' visual attention represents an evolutionarily adaptive process because it often signals the level of leaders' interest in and attention to certain objects, events, or individuals in their environment (e.g., Van Vugt et al., 2008; Zuberbühler, 2008). These signals, which are based on a leader's visual attention, often provide useful information that aids in followers' well-being and survival (Frischen et al., 2007; Liuzza et al., 2011).

In the current research, we focus on a leader's visual attention toward group members as an influential nonverbal element that can shift asymmetric

influence patterns in demographically diverse groups. Drawing on the literature on gazing behavior and the categorization-elaboration model (CEM), we argue that a leader's greater visual attention toward low-status members attenuates asymmetric influence patterns among members engaged in collective decision-making tasks, which in turn leads to enhanced group information elaboration and better performance in collective decision-making tasks.

Our work contributes to the diversity literature by demonstrating the emergence of asymmetric influence patterns in diverse groups and by identifying the negative effects of these unequal patterns on group decision-making processes and performance. We further contribute to the literature on diversity and group functioning by offering a countermeasure to shift asymmetric influence patterns. Specifically, we demonstrate that a leader's increased visual attention toward low-status members can attenuate asymmetric influence patterns in diverse groups. In doing so, we answer calls to identify potential solutions that successfully manage diversity (Kulik, 2014). Finally, by exploring the sequential mediating mechanisms on the impact of a leader's visual attention on group performance, we seek to build a more comprehensive explanation of how reduced asymmetric influence patterns, driven by a leader's gaze, can positively affect group information elaboration and performance.

### A LEADER'S VISUAL ATTENTION

Scholars in the fields of sociology, psychology, and anthropology have long emphasized the critical nature of eye gaze as a nonverbal cue that affects individuals' perceptions and subsequent behaviors (Ambady & Skowronski, 2008; Burgoon, Guerrero, & Manusov, 2011; Emery, 2000; Knapp & Hall, 2009; Manusov & Patterson, 2006). Among other nonverbal cues, people particularly rely on the eye gaze of others during interactions because eye gaze often signals their intentions, thoughts, or beliefs (Baron-Cohen, 1995; Emery, 2000; Shepherd, 2010). For instance, if a person looks at a target individual for an unusually long time (persistent gaze or staring), it often signals that the gazer is motivated to threaten or dominate the target (Staats, Ross, Irmscher, & Rada, 2002). If a person looks at a target moderately (direct and benign gaze), it generally signals that the gazer perceives the target as trustworthy, valuable, or likeable (Kleinke, 1986; Wirth, Sacco, Hugenberg, & Williams, 2010). Finally, if a person looks away from a target (averted gaze), it generally signals that

the gazer is not interested in the target or is not motivated to be close to the target (Wirth et al., 2010; Young, Slepian, Wilson, & Hugenberg, 2014). In summary, because eye gaze often conveys information that can facilitate communication as well as interpersonal relationships (Edinger & Patterson, 1983; Purvis, Dabbs, & Hopper, 1984), it tends to be distinguished from other attentional indicators, such as head or body position, and is often specifically referred to as visual attention (Henderson, 2003; Pashler, 1998; Ziv, 2016) (hereafter, we will primarily refer to eye gaze as visual attention). Given that direct and benign gaze is common in many communication contexts, in the current research, we are interested in this type of positive visual attention from leaders in newly formed groups, especially when they are providing guidelines and allocating tasks to group members.

In the current research, we focus on a leader's positive visual attention as a potential solution to mitigate asymmetric influence patterns in diverse groups for at least two reasons. First, one important function of positive visual attention is that it indicates a gazer's level of approval and recognition toward a receiver (Friedman, 1967; Jones & Cooper, 1971). Goffman (1963) contended that when a person looks at another person frequently in a positive way, it indicates that the gazer is attending positively to, or has positive expectations of, the target person. When individuals notice someone is looking at them during an interaction, they spontaneously believe the person may be interested in interacting with them, accepting them, or valuing them (Friedman, 1967; Jones & Cooper, 1971; Wirth et al., 2010). More importantly, because eye gaze is subtle (Emery, 2000), it is possible that a leader provides his or her recognition and approval to a certain group member in an indirect and subtle manner rather than in a direct and overt way. Thus, a leader's subtle positive attention via eye gaze toward low-status members may more readily shift asymmetric influence patterns among members in diverse groups without eliciting negative reactions from high-status members who receive less positive attention from a leader.

In addition, interventions based on a leader's visual attention may offer a relatively simple and effective strategy to increase low-status members' participation without imposing an undue burden on the person or organization involved. Although the implementation of procedural systems may yield significant improvements in group communication styles, these interventions often require extensive systematic communications, intensive training

sessions, and even cultural changes to help employees apply new policies to their work (Kelly & Moen, 2007). Consequently, the implementation of such procedures in the workplace tends to require a significant amount of time and effort, as well as financial investment (Kelly & Moen, 2007). In contrast, although visual attention may seem reflexive, it is actually within the gazer's control (Ellsberg, 2010). That is, leaders can readily learn to regulate and improve their gazing behavior through simple interventions (e.g., watching videos of themselves and sensitivity training programs) (Alberts, Nakayama, & Martin, 2007; Ellsberg, 2010).

Accordingly, we believe it is worthwhile to focus on a leader's visual attention as an important and effective countermeasure to reduce asymmetric influence patterns among members in diverse groups. The goal of this research is to investigate how a leader's greater visual attention toward a low-status member can shift group members' asymmetric behavioral patterns and how this change can affect subsequent group decision-making processes and group performance. Below, we first describe how demographic diversity creates an asymmetric influence pattern among group members. We then explain how a leader's greater visual attention toward a low-status member attenuates this asymmetric influence pattern among members in diverse groups and consequently affects group information elaboration and performance.

### THE IMPACT OF A LEADER'S VISUAL ATTENTION ON DISPARITY IN MEMBER INFLUENCE

According to status characteristics and expectation states theories (Berger et al., 1980; Berger & Zelditch, 1985; Ridgeway & Walker, 1995), group members' demographic attributes tend to shape implicit evaluations about who will make valuable contributions to group tasks. These evaluations are called "performance expectation states" or "performance expectations." Key elements in establishing group members' performance expectations are status cues or status characteristics (i.e., signals that indicate who is likely to help the group reach its goals or who has helped the group to do so) (e.g., Berger et al., 1980; Bunderson, 2003; Ridgeway, 1982; 1987). According to Bunderson (2003: 560), "through socialization in a broader culture (society, industry, profession, organization), individuals learn to associate different personal characteristics with task competence or ability." When individuals'

different demographic attributes are salient within a diverse group, these demographic characteristics often serve as status cues (Berger & Zelditch, 1985; Ridgeway & Walker, 1995). In other words, group members tend to use these cues to make implicit judgments regarding individual members' future performance and consequently determine who will attain higher status within a group (Berger & Zelditch, 1985; Bunderson, 2003).

More importantly, group members' behaviors are often shaped in a manner consistent with their status (Berger et al., 1980; Berger & Zelditch, 1985; Ridgeway & Walker, 1995). Thus, in diverse groups where demographic characteristics often lead to the creation of performance expectations and status differentials between members, high-status members are likely to speak up and take the initiative at the beginning of interactions (e.g., Ridgeway, 1991). In a complementary way, low-status members are likely to respond submissively by listening to high-status members' ideas and deferring to them as they lead the discussion (e.g., Berger & Zelditch, 1985). In this way, asymmetric influence patterns among members can be established in diverse groups.

In the current research, we refer to this asymmetric influence pattern as the disparity in member influence, which refers to the degree to which high- and low-status members differ in terms of their influence over important team decisions when working together (Harrison & Klein, 2007). As noted in the introduction, disparity in member influence frequently occurs in demographically diverse groups, such as surgical teams (e.g., surgeons and nurses), research teams (e.g., scientists and technicians), and engineering teams (e.g., male and female engineers). For example, if high-status members such as surgeons, scientists, or male engineers lead group discussions and make suggestions at the beginning of interactions, low-status members may comply with, and be submissive toward, high-status members rather than voice their opinions and concerns (e.g., Berger et al., 1980; Berger & Zelditch, 1985; Ridgeway, 1991). In a surgical team, for instance, asymmetric influence patterns between surgeons and nurses are strong and clear, which means "surgeons routinely ask for and receive unquestioning obedience from nurses ... and nurses are unlikely to question surgeons' superiority concerning medical issues" (Chattopadhyay, Finn, & Ashkanasy, 2010: 810). Although nurses should actively share their expertise and perspectives regarding various issues involved in surgical procedures, in many cases they tend to follow surgeons' directives and decisions,



and surgeons tend to take a unilateral stance in decision-making processes and make important decisions on their own instead of considering nurses' perspectives and opinions (Chattopadhyay et al., 2010). Consequently, this disparity in member influence may prevent groups from considering and integrating different perspectives and solutions based on diverse opinions and knowledge from members, which can diminish group performance.

Indeed, professionals at one of the top hospitals in the world, Johns Hopkins, have long realized that an environment in which disparity in member influence is prevalent (such as that between surgeons and nurses in hospitals) may pose serious dangers. Thus, Johns Hopkins recently developed a checklist to reduce medical mistakes through communication by empowering nurses and frontline workers to speak up. The results were so dramatic that two years after adopting the checklist and allowing nurses and frontline workers to vocalize their opinions, the hospital found that 43 infections and eight deaths had been prevented and \$2 million in cost savings had been realized (Bedi & McGrory, 2018; Gawande, 2010). These results highlight the importance of nurses and frontline healthcare workers making their voices heard to ensure optimal outcomes are achieved. Bedi and McGrory (2018) quoted patient safety researcher Douglas McCarthy, who said: "the people on the frontlines are the ones who really know what the problems are and how to solve them." Accordingly, it is critical to understand how to attenuate asymmetric influence patterns—in other words, how to help low-status members speak up when both high- and low-status members work together in demographically diverse groups. Our success in understanding this important issue clearly has the potential to facilitate the successful management of diversity.

In the current research, we seek to address this issue by focusing on a leader's visual attention as a simple and effective intervention to attenuate asymmetric influence patterns among members. As previously noted, we believe it is useful to focus on a leader's visual attention as an effective countermeasure to reduce asymmetric influence patterns among members, particularly because this subtle, nonverbal attention may be less likely to elicit negative reactions from other members, and it does not require significant time and effort to successfully implement the intervention in the workplace. Although a leader's visual attention is a subtle cue, we propose that when it is positively directed at a low-status member more often than a high-status member in task-

oriented situations, group members will selectively pay attention to this subtle but visible difference from a leader. This notion aligns with the larger body of research on selective attention, suggesting that due to limited information-processing capacity, individuals tend to selectively focus on certain informational cues driven by their motivation, goals, or task demands (Lavie, 1995; Ocasio, 2011; Trawalter, Todd, Baird, & Richeson, 2008). Given that members are instinctively motivated to follow the direction of a leader's visual attention (e.g., Emery, 2000; Ohlsen et al., 2013), they will selectively pay attention to a leader's greater visual attention toward a certain member during an interaction within a group.

Drawing on the literature on gazing behavior and organizational support, we propose that when a leader devotes greater visual attention to a low-status member during initial interactions, such increased attention will attenuate the asymmetric pattern of influence between members in demographically diverse groups. According to the literature on eye gaze, because positive visual attention indicates a gazer's level of approval and recognition toward a receiver (Friedman, 1967; Jones & Cooper, 1971), individuals who receive positive visual attention from someone may subsequently feel accepted, valued, and supported (Friedman, 1967; Jones & Cooper, 1971; Wirth et al., 2010). In addition, the organizational support literature has suggested that when individuals feel validated and accepted by leaders, they are more likely to feel empowered and motivated to actively engage in work assignments (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gomez & Rosen, 2001).

Building on this logic, when a leader devotes greater positive visual attention to a low-status member as opposed to providing equal visual attention or greater visual attention to a high-status member, the low-status member should feel encouraged and motivated to engage in the assigned group task. As a result, the low-status member may be likely to speak up and share his or her knowledge, opinions, and suggestions during a group discussion that includes a high-status member. Likewise, when a high-status member notices that a low-status partner receives more positive visual attention from a leader, he or she may be likely to listen to and respect that low-status member's perspectives and information.

Taken together, when a leader gives greater visual attention to a low-status member than a high-status member, the low-status member would be likely to actively raise his or her voice and make suggestions, and the high-status member would be likely to pay

attention to the low-status member's perspectives rather than substantially lead decision-making processes and make important decisions without considering the perspectives of low-status members. In this way, a leader's increased visual attention toward a low-status member may attenuate the disparity in member influence between high- and low-status members that generally arises in diverse groups. Therefore, we propose the following:

*Hypothesis 1. When a member with a low-status diverse characteristic receives greater visual attention from a leader than a member with a high-status diverse characteristic in a diverse group, the disparity in member influence is lower than when both members receive equal visual attention or when a member with a high-status diverse characteristic receives greater visual attention than a member with a low-status diverse characteristic.*

### THE IMPACT OF A LEADER'S VISUAL ATTENTION ON GROUP EFFECTIVENESS

If a leader's increased visual attention directed toward a low-status member is capable of attenuating the disparity in member influence, how would this change impact group effectiveness? What underlying mechanism would drive this effect? To answer these questions, we focus on how reduced disparity in member influence affects the information elaboration process, which refers to the way in which group members exchange, process, and integrate diverse information, knowledge, and perspectives with one another (e.g., van Knippenberg, De Dreu, & Homan, 2004).

According to the CEM, group information elaboration is critical in tasks requiring groups to consider diverse information and opinions to solve problems (e.g., Gilson & Shalley, 2004; Hargadon & Bechky, 2006; Larson, 2007). In particular, the CEM contends that in addition to the exchange of information and perspectives, a deeper, more extensive discussion and integration of diverse information and knowledge may lead to better group performance (De Dreu, 2007; Homan et al., 2007; Jehn, Northcraft, & Neale, 1999). Indeed, meta-analysis research and empirical studies have consistently demonstrated that when group members carefully discuss information and perspectives brought to the table to better understand the implications of each member's expertise and experience and integrate these implications, they can find creative solutions to problems and generate new ideas and insights, leading to enhanced group performance in collective decision-making

tasks (e.g., Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; Homan et al., 2008; van Ginkel & van Knippenberg, 2008).

A core tenet of the CEM is that group members must be motivated to actively share, process, and integrate diverse task-relevant information together to ensure a productive information-elaboration process (Nederveen Pieterse, van Knippenberg, & van Dierendonck, 2013; van Knippenberg et al., 2004). Importantly, this collective motivation within a group to actively search for and consider a wider range of information depends on the extent to which group members are responsible and accountable for a group task. Research on social cognition has clearly suggested that individuals tend to be motivated to actively and deliberately process knowledge and opinions raised by group members when they feel they are responsible and accountable for assigned tasks (Bunderson, 2003; Fiske & Taylor, 1991; Lerner & Tetlock, 1999). In addition, in circumstances in which all group members are likely to equally participate in group decisions and have some influence over these decisions, they are likely to feel a greater sense of responsibility and accountability for those decisions (Bunderson, 2003). Therefore, we argue that if disparity in member influence is reduced and all group members are likely to influence decisions that are made, these members will feel accountable and responsible for their decisions and group tasks and will consequently be motivated to actively search for and consider a wider range of information and knowledge together. In contrast, in circumstances in which high-status members lead discussions while low-status members behave in a more submissive manner, this disparity in member influence may lead low-status members to feel less responsible for group tasks and diminish group members' overall motivation to share, process, and integrate diverse information and perspectives together to achieve better outcomes.

Building on this logic, we expect that if a leader provides greater visual attention to a low-status member and this visual attention attenuates the disparity in member influence, group members may be motivated to actively share their own information and perspectives, consider the implications of those perspectives, and integrate all such knowledge into their decision-making processes. As a result, group information elaboration will be increased. Accordingly, we predict that a leader's greater visual attention toward a low-status member, as opposed to the leader's equal or greater visual attention toward a high-status member, will enhance information

elaboration in the group. In addition, we predict that reduced disparity in member influence will mediate the impact of a leader's greater visual attention toward a low-status member on information elaboration. Therefore, we predict the following:

*Hypothesis 2. When a member with a low-status diverse characteristic receives greater visual attention from a leader than a member with a high-status diverse characteristic in a diverse group, group information elaboration is higher than when both members receive equal visual attention or when a member with a high-status diverse characteristic receives greater visual attention than a member with a low-status diverse characteristic.*

*Hypothesis 3. The positive effect of a leader's greater visual attention toward a member with a low-status diverse characteristic (compared to a leader's equal visual attention or a leader's greater visual attention toward a member with a high-status diverse characteristic) on group information elaboration is mediated by disparity in member influence.*

Furthermore, because information elaboration is critical to group performance (e.g., Homan et al., 2008; Homan et al., 2007; van Knippenberg et al., 2004), we expect that a leader's greater visual attention toward a low-status member will ultimately improve group performance when compared to the other two conditions. We therefore propose the following:

*Hypothesis 4. When a member with a low-status diverse characteristic receives greater visual attention from a leader than a member with a high-status diverse characteristic in a diverse group, group performance is higher than when both members receive equal visual attention or when a member with a high-status diverse characteristic receives greater visual attention than a member with a low-status diverse characteristic.*

This series of proposals converges on the model depicted in Figure 1. Specifically, our theoretical perspective proposes that compared to a leader's equal visual attention toward high- and low-status members or a leader's greater visual attention toward

a high-status member, a leader's greater visual attention toward a low-status member will attenuate the disparity in member influence, thereby promoting higher group information elaboration that will in turn improve group performance. We therefore propose the following causal hypothesis:

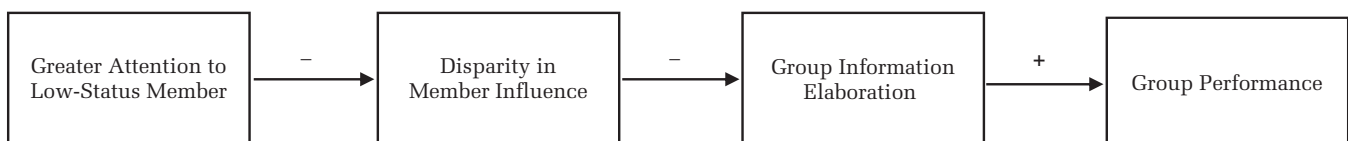
*Hypothesis 5. The positive effect of a leader's greater visual attention toward a member with a low-status diverse characteristic (compared to a leader's equal visual attention or a leader's greater visual attention toward a member with a high-status diverse characteristic) on group performance is mediated in sequence by disparity in member influence and by group information elaboration in a diverse group.*

## RESEARCH OVERVIEW

To test these hypotheses, we conducted two experimental studies. Laboratory experiments enabled us to examine causal mechanisms, observe and code group-level behavior, and systematically control a leader's visual attention. Our studies were designed to investigate how a leader's visual attention (i.e., a leader's greater visual attention toward a low-status member) affects disparity in member influence, as well as how this effect influences group information elaboration and performance in diverse groups. Because the focus of our research is on diverse groups, we created two types of diverse groups to increase the generalizability of the findings. According to the diversity literature, one way to distinguish between different types of diversity characteristics within a group is to divide them into two dimensions: readily observable attributes that may be less job related (e.g., race and gender) and less readily observable attributes that may be more job related (e.g., educational background and pay) (Jehn et al., 1999; Milliken & Martins, 1996; van Knippenberg et al., 2004; van Knippenberg & Schippers, 2007). Based on this distinction, in Study 1, we examined diverse groups with a readily observable characteristic (i.e., race) by recruiting racially diverse individuals (i.e., White and Black members within a group).

FIGURE 1

### A Theoretical Model of the Impact of a Leader's Visual Attention on Performance in Diverse Groups



In Study 2, we examined diverse groups with a less readily observable characteristic (i.e., educational background) by recruiting educationally diverse individuals (i.e., one member from an advanced program and another member from a regular program). Across the two studies, we used collective decision-making tasks (i.e., a ranking task and a hidden-profile task) to examine the elaboration of diverse perspectives and information during discussions as well as subsequent performance.<sup>1</sup>

## STUDY 1

### Participants and Task

Two hundred and twenty-six undergraduates (60 male, 166 female) at Midwestern and East Coast universities participated in this study.<sup>2</sup> Half of the

<sup>1</sup> Consistent with the relational demography literature and status characteristics theory, our theoretical assumption in the current research is that group members' race and educational background tend to shape status differentials between group members (e.g., Berger & Zelditch, 1985; Leslie, 2017; Ridgeway, 1987). For example, when a group comprises racially diverse members, such as White and Black individuals, the White members are often perceived as more valuable and influential; consequently, they often attain higher status in a group than Black members (e.g., Fiske, 2000; Leslie, 2017; Ridgeway, 1991; Zou & Cheryan, 2017). To test this assumption, we conducted two studies using the same subject pools we used for our data collection in Studies 1 and 2. In the studies, we asked participants to rate their partner's status (Kilduff & Galinsky, 2013; "I respect my partner" and "I feel that my partner will have an influence on a group task") on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The results of the first study showed that Black participants perceived their White partners to have higher status ( $M = 5.27$ ,  $SD = .95$ ); conversely, White participants perceived their Black partners to have lower status ( $[M = 4.67$ ,  $SD = 1.01]$ ,  $F[1, 83] = 7.96$ ,  $p < .01$ ,  $\eta^2 = .09$ ). The results of the second study revealed that students in the advanced program were perceived to have higher status ( $M = 5.50$ ,  $SD = .68$ ) than those in the regular program ( $[M = 5.00$ ,  $SD = .95]$ ,  $F[1, 118] = 23.66$ ,  $p < .001$ ,  $\eta^2 = .17$ ).

<sup>2</sup> In order to obtain sufficient Black representatives, we conducted the experiment in two different business schools: one located at a Midwestern university and the other located at an East Coast university. At each university, we first recruited two White confederates (one male and one female) who could perform the role of a group leader; thus, we ended up recruiting a total of four White confederates from two universities and training them. At the Midwestern university, the participants were 120 undergraduates (28 males and 92 females). At the East

participants were White, and the other half were Black. Given that gender is one of the primary diversity characteristics that affects group dynamics, we controlled for the gender of group members and their confederate leader by matching all groups (including leaders) by gender (i.e., male groups or female groups). We also controlled for the potential influence of leaders' race by recruiting only White confederates.

In the study, we defined a group as a unit of three persons (two members and a leader). Although group leaders did not participate in decision-making processes in the study, they played a critical role by delivering the goals of a group task and providing detailed background information, as well as guidelines about how to complete the tasks at hand. The unique roles of group leaders and group members were clearly explained to members at the beginning of the study.

The group's task followed Lafferty and Pond's (1974) desert survival task. Participants were asked to rank the importance of 15 items (e.g., salt, a mirror, a raincoat, etc.) in achieving two goals: (a) being rescued in the desert and (b) surviving until they were rescued. This task involved the correct ranking of the items based on an assessment by experts. Thus, this task allows for an objective assessment of individual competence and group performance. These ranking tasks and the modified versions of the desert survival task have been widely employed as a collective decision-making task because they allow people to exchange and discuss ideas and perspectives when making group decisions (Farh, Lanaj, & Ilies, 2017; Kilduff & Galinsky, 2013; Oedzes, Van der Vegt, Rink, & Walter, 2018; Stroebe, Nijstad, & Hemelrijk, 2017; Tost, Gino, & Larrick, 2013). Kilduff and Galinsky (2013: 821) argued that these ranking tasks "are engaging, encourage debate, and serve to simulate real-world situations in which group decisions must be made."

### Procedure

This study comprised four phases. In Phase 1, to manipulate a leader's visual attention, we first recruited four White confederates (i.e., two White males and two White females) to match the gender of the participants. The confederates were asked to memorize the script for the desert survival task.

Coast university, the participants were 106 undergraduates (32 males and 74 females).



They were then trained to gaze at participants for prescribed amounts of time without appearing unnatural or robotic. After ensuring that the confederates were confident about properly according either unequal or equal visual attention (the specific visual attention conditions are described below) while delivering specific task guidelines, we recruited participants for the data collection process.

Specifically, we recruited racially diverse individuals (i.e., White and Black members within a group) and created three conditions: (a) the low-status attention condition, in which a member with a low-status diverse characteristic (i.e., a Black participant) received greater visual attention from a leader than a member with a high-status diverse characteristic (i.e., a White participant); (b) the high-status attention condition, in which a member with a high-status diverse characteristic (i.e., a White participant) received greater visual attention from a leader than a member with a low-status diverse characteristic (i.e., a Black participant); and (c) the equal attention condition, in which both White and Black participants received an equal amount of visual attention from a leader.

In Phase 2, following completion of the consent form, two participants were randomly paired and assigned to one of the three conditions outlined above (i.e., low-status attention, high-status attention, and equal attention conditions). To ensure that the different roles of the group leader and group members were clear to members, we informed participants that their group leader would assign them to a group task and provide detailed guidelines on how to approach the task. Specifically, two paired participants entered a room and an experimenter then recited the following script:

Welcome to the group decision-making study. Today, you will be placed with a group of two people—you and your partner here—and a group leader, who will be coming into the room shortly. All three of you will work on a group task. Your group leader will initially provide your group with information about the goals and missions of the task. He/she will also provide detailed background information about the task and specific guidelines about how to complete it. Each one of you will then have time to brainstorm the task individually. Afterward, you two will work together to make a decision. During this time, you will share ideas and perspectives with each other in order to make a collective decision without input from your leader. Your leader will not participate with you two in the actual decision-making process but will review your decision later and make a final decision. Guidelines and background information for the task

provided by the leader will be critical and helpful in working on the group task. So please pay attention to your group leader's explanations.

Subsequently, the group leader entered the room and welcomed the two group members. The leader first provided a brief introduction to the participants, explaining that he or she was a second-year MBA student with leadership experience at a company, and that he or she had used the desert survival task to train his or her group members before joining the MBA program. All of this information was designed to give the leader legitimacy, as employed in previous research (e.g., Sauer, 2011; Weber & Murnighan, 2008). The leader then explained that the desert survival task asks participants to rank 15 items according to their importance for survival in the desert after a plane crash. Following this, the leader instructed participants to first rank the items individually and then as a group. Before leaving, the leader emphasized the groups' two goals: to be rescued and to survive until their rescue. The leader then encouraged participants to carefully consider which items would be more useful in their rescue and survival. During this initial interaction between the leader and group members, the leader gave either unequal or equal visual attention to group members, as assigned.

In the unequal visual attention conditions (i.e., low-status attention and high-status attention conditions), the confederate who acted in the role of group leader explained the task and its goals while looking at a member who was assigned to receive greater attention for roughly six seconds before shifting their attention to a member who was assigned to receive less attention for roughly two seconds (Argyle & Cook, 1976; Argyle & Ingham, 1972).<sup>3</sup> The confederate leader then shifted their attention back to the member who was assigned to receive greater attention for about six seconds before again shifting their attention to his or her partner for about two seconds.

<sup>3</sup> This gaze distribution manipulation was based on previous research suggesting that the preferred duration of a gaze is approximately two to six seconds (Argyle & Cook, 1976; Argyle & Ingham, 1972). Based on these findings, we designed the manipulation such that individuals who were assigned to receive more attention would receive the maximum amount of attention people generally prefer (approximately a six-second gaze), and individuals who were assigned to receive less attention would receive the minimum amount of attention people generally prefer (approximately a two-second gaze).

This shift in attention continued for approximately three minutes, which was the amount of time required to explain the task. In the equal visual attention condition, the confederate leader alternated his or her gaze between each group member approximately every four seconds during the three-minute presentation.

To ensure that gaze manipulation was the only difference across the conditions, and to pursue internal validity, we trained four confederate leaders to follow the same script and specific guidelines precisely (e.g., they made certain they did not smile at or lean toward a certain group member while explaining a group task). We also required confederate leaders to maintain the same physical distance between the two group members by establishing seating positions accordingly. Specifically, the confederate leader took a seat at the head of the table, and the two group members sat either to the right or to the left of the leader at the same distance. The initial analyses revealed that there were no significant differences between the four confederate leaders. This indicates that other characteristics of confederate leaders (e.g., voice tone, extraverted behavior, warm character) were controlled for, with the exception of their gaze.

In Phase 3, each participant went to an individual breakout room and ranked the desert survival items from most to least important. Afterward, the two participants were reunited and asked to jointly rank the 15 items without input from their leader. We used this group ranking to determine group performance (i.e., the extent to which the final decision was correct), as employed in previous research (Littlepage & Mueller, 1997; Littlepage, Schmidt, Whisler, & Frost, 1995). The group discussion was videotaped to assess disparity in member influence as well as group information elaboration during the group discussion.

In Phase 4, participants again went to individual breakout rooms and completed a post-discussion questionnaire to assess their influence during a group discussion and to determine whether the manipulation of a leader's visual attention was successful. Specifically, as a manipulation check, we asked the participants to rate how much attention they had received from the leader during the initial interaction: "Do you think you and your partner received the same amount of attention from your leader at the beginning of the study? (yes/no). If not, how much attention do you think you received from the leader? (1 = none at all, 7 = very much)." Finally, we debriefed the participants by providing them with a debriefing statement that included an

explanation of the purpose of the study. We also verbally asked if there was anything they would like to talk about regarding the study to determine whether there were any suspicions among the participants regarding the study's procedure.

## Measures

**Disparity in member influence.** Disparity in member influence involves the degree to which two members differ in terms of their influence over important team decisions when working together (Harrison & Klein, 2007). Based on the work of Harrison and Klein (2007) and scales of influence that have been used in previous research (e.g., Anderson & Kilduff, 2009), we focused on three major components (i.e., talking time, making decisions and suggestions, and leading or controlling discussions) and created a coding scheme to capture the disparity in member influence. Specifically, based on the three components identified above, we measured the degree to which one member talks more, makes important decisions and suggestions, and leads the discussion (e.g., "Let's talk about other items such as water" and "I think it is a waste of time to keep talking about this issue"), whereas the other member listens to his or her partner's opinions, seems to hesitate in making suggestions, and defers to his or her partner's ideas (e.g., "I think that is a good idea" and "I don't mind following your decisions").

Table 1 includes a specific coding scheme per each range of disparity in member influence. To assess the disparity in member influence during a group discussion, two independent coders who were blind to the hypotheses watched each videotape and rated the disparity in member influence based on the specific coding scheme shown in Table 1. Since two coders' ratings demonstrated good interrater reliability ( $ICC1 = .68$ ,  $ICC2 = .81$ ,  $p < .001$ ; mean  $r_{wg} = .88$ ), we averaged them to compute an overall score for disparity in member influence (Bliese, 2000; Klein & Kozlowski, 2000; LeBrenton & Senter, 2008).

**Group information elaboration.** To assess group information elaboration, a second set of two independent coders who were blind to the hypotheses watched each videotape and rated each group's information elaboration. Based on scales from previous researchers (Homan et al., 2007; Resick, Murase, Randall, & DeChurch, 2014; van Dick, van Knippenberg, Hägele, Guillaume, & Brodbeck, 2008), we modified the scales and measured two core behaviors related to group information elaboration (i.e., processing and integration of information and

**TABLE 1**  
**Specific Guidelines of Each Range for Measuring Disparity in Member Influence**

Points	Meaning	Description	Additional Explanations
1	Two members have the same amount of influence	Two members talk in overall equal amounts, collaboratively make important decisions and offer suggestions, and lead discussions in an equal manner with the other member. The two members seem to be open to hearing each other's suggestions.	<ul style="list-style-type: none"> <li>• Usually, no interruptions occur during the conversation.</li> <li>• Members tend to mention facts first and then make suggestions, rather than directly making their own suggestions.</li> <li>• Members use "maybe" often.</li> </ul>
2	One member has slightly more influence than the other	One member talks slightly more, makes slightly more decisions and suggestions, and tends to lead the discussions slightly more than the other member (e.g., by saying, "Let's move on," "Let's talk about the other items, such as the salt or raincoat," or "Let's discuss him after we go through all the candidates"), whereas the other member tends to hesitate slightly in making suggestions, listens to the other person's opinions slightly more, and defers slightly to the other person (e.g., by making comments such as, "I think your point/suggestion makes sense" or "That's right" a couple of times).	<ul style="list-style-type: none"> <li>• Few interruptions occur, but these interruptions do not really hinder how the other member comments.</li> <li>• Members tend to say, "Mine is not like that, but you can give me more information about it."</li> </ul>
3	One member has more influence than the other	One member talks noticeably more, occasionally makes decisions and suggestions, and actively leads discussions (e.g., by making comments such as, "I don't think that is a valid point to consider" or "I think the first thing we should do is to make sure..."), whereas the other member typically hesitates in making suggestions, occasionally simply listens to the opinion of the other person, and generally defers to the other person (e.g., by occasionally saying, "That's a great suggestion" or "That's so true").	<ul style="list-style-type: none"> <li>• The more influential member occasionally asks the other member, "What else?" in order to facilitate the discussion and allow the other member to speak.</li> <li>• The more influential member tends to summarize his/her own opinions, as well as the other person's thoughts, and then draws a conclusion.</li> </ul>
4	One member has significantly more influence than the other	One member talks significantly more, makes most of the decisions and suggestions, and dominantly leads the discussion (e.g., by commenting, "We should exclude Chris as a good candidate," "Salt should be ranked as less important," or "We should stop talking about water now"), whereas the other member hesitates in making suggestions during most of the discussion, listens to the other person most of the time, and defers significantly to the other person (e.g., by generally making comments such as, "I totally agree with you," "You would know more about this candidate than I do," or "That makes complete sense").	<ul style="list-style-type: none"> <li>• The more influential member tends to ask "Are you sure it is...?" when the other member makes some points/suggestions.</li> </ul>
5	One member has far more influence than the other	It is possible but not necessary that one member is almost always talking, makes almost all of the decisions and suggestions, and leads the discussion almost entirely (e.g., by commenting, "Brian should be the best candidate" or "Water should be ranked as the most important"), whereas the other member hesitates in making suggestions most of the time, listens unconditionally, defers almost entirely to the other person, and only infrequently voices an opinion (e.g., by commenting, "I have no ideas to add here," "You're right, of course," or "I don't mind following your suggestion").	<ul style="list-style-type: none"> <li>• The more influential person often uses phrases such as "I am sure it is" when expressing his or her views.</li> <li>• The more influential member seems to be almost entirely responsible for summarizing discussions and controlling the flow of the conversation, whereas the other member only responds to his/her partner, commenting "Okay" or "Right."</li> </ul>

perspectives).<sup>4</sup> Specifically, this measure included two items: “When one of the members mentioned a piece of information, the group members discussed new perspectives or implications regarding the information (processing)” and “Group members combined implications that arose from a piece of information with implications from other pieces of information (integration of information and perspectives).” All of the items were scored on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Because two independent coders achieved good interrater reliability ( $ICC1 = .71$ ,  $ICC2 = .83$ ,  $p < .001$ ; mean  $r_{wg} = .84$ ), we averaged their ratings.

**Group performance.** We determined group performance by comparing each group’s final rankings of the 15 desert survival items to the expert rankings (e.g., Lafferty & Pond, 1974; Littlepage & Mueller, 1997; Littlepage et al., 1995). Specifically, we used Littlepage et al.’s (1995: 879) formula as follows:

Group Performance

$$= 112 - \left( \sum_1^{15} | \text{group ranking} - \text{expert ranking} | \right)$$

Discrepancies between the group’s and experts’ rankings counted as errors. To create an index of group performance in which higher scores reflected higher levels of performance, we subtracted the sum of the errors from a constant.

## Results

Table 2 presents the means, standard deviations, and correlations.

**Manipulation checks.** The manipulation of the leader’s attention was successful. In the equal attention condition, all of the participants reported that they had received the same amount of attention from the leader. In the unequal attention conditions (i.e., low-status attention and high-status attention conditions), all of the participants (with the exception of three people, each from a different group) reported that they and their partner had not received the same amount of attention from the leader. In the low-status attention condition, members with a low-status diverse characteristic (i.e., Black members) reported

having received more attention ( $M = 4.86$ ,  $SD = .76$ ) than members with a high-status diverse characteristic (i.e., White members) ( $M = 3.67$ ,  $SD = .72$ ),  $F[1, 70] = 46.93$ ,  $p < .001$ ,  $\eta^2 = .40$ ). Similarly, in the high-status attention condition, members with a high-status diverse characteristic (i.e., White members) reported having received more attention ( $M = 4.97$ ,  $SD = .89$ ) than members with a low-status diverse characteristic (i.e., Black members) ( $M = 3.63$ ,  $SD = .84$ ),  $F[1, 68] = 41.96$ ,  $p < .001$ ,  $\eta^2 = .38$ ).

During the debriefing session, we learned that three participants (from different groups) suspected that the leader’s attention had been contrived; these participants and their groups were excluded from subsequent analyses. Thus, the final sample included 220 participants.<sup>5</sup> The number of low-status attention groups was 38, the number of equal attention groups was 36, and the number of high-status attention groups was 36. We coded low-status attention groups as 0, equal attention groups as 1, and high-status attention groups as 2.<sup>6</sup>

**Disparity in member influence.** There was a significant difference in disparity in member influence across the three groups ( $F[2, 107] = 7.74$ ,  $p = .001$ ,  $\eta^2 = .13$ ). Consistent with Hypothesis 1, the post hoc analyses indicated that in the low-status attention groups in which a Black member received greater

<sup>5</sup> The pattern and significance ( $p < .05$ ) of all of the findings remained the same when we included participants who were excluded from the analyses. In addition, the initial analyses included location (i.e., two schools where we collected data), but significant location effects were not observed. Accordingly, we dropped the location from the analyses.

<sup>6</sup> To test our mediation hypotheses (Hypotheses 3 and 5), we needed to establish the low-status attention condition as the baseline because we wanted to compare the low-status attention condition (as our main experimental condition) with the equal attention condition and also to compare the low-status attention condition with the high-status attention condition. The PROCESS macro was appropriate for testing our mediation hypotheses, and the coding system in the PROCESS macro program automatically established the condition coded as the lowest number (e.g., the condition coded as 0) as the baseline. Accordingly, we have coded the low-status attention condition as 0 for the data analyses in Studies 1 and 2. Because the low-status attention condition was coded as the lowest number, the signs of the effect were negative in the mediation analyses for testing Hypotheses 3 and 5 in both studies, whereas our theoretical model represents the positive effect of a low-status attention condition on group information elaboration (Hypothesis 3) and group performance (Hypothesis 5).

<sup>4</sup> To ensure the two measures (i.e., group information elaboration and disparity in member influence) were clearly distinct, we focused on two core behaviors related to group information elaboration (processing and integration), excluding the exchange of information component because this component may overlap with the measure of disparity in member influence (e.g., making suggestions and decisions).



**TABLE 2**  
Means, Standard Deviations, and Correlations in  
Study 1

Variable	Mean	SD	1	2	3
1. Group Type	.98	.82			
2. Disparity in Member Influence	2.64	.79	.23 <sup>†</sup>		
3. Group Information Elaboration	3.77	1.13	-.21 <sup>†</sup>	-.47*	
4. Group Performance	48.70	12.69	-.18	-.40*	.46*

<sup>†</sup>  $p < .05$

\*  $p < .001$

attention, disparity in member influence was lower ( $M = 2.28$ ,  $SD = .79$ ) than in the equal attention groups ( $[M = 2.94$ ,  $SD = .73]$ ,  $p = .001$ ) and in the high-status attention groups in which a White member received greater attention ( $[M = 2.71$ ,  $SD = .69]$ ,  $p = .04$ ). There was no significant difference in disparity in member influence between the high-status attention groups and the equal attention groups ( $p = .37$ ).

**Group information elaboration.** There was a significant difference in group information elaboration across the three groups ( $F[2, 107] = 6.22$ ,  $p < .01$ ,  $\eta^2 = .10$ ). Consistent with Hypothesis 2, the post hoc analyses indicated that in the low-status attention groups, group information elaboration was higher ( $M = 4.24$ ,  $SD = 1.29$ ) than in the equal attention groups ( $[M = 3.36$ ,  $SD = .94]$ ,  $p < .01$ ) and in the high-status attention groups ( $[M = 3.68$ ,  $SD = .97]$ ,  $p = .07$ ), although this finding was not statistically significant. There was no difference in group information elaboration between the high-status attention groups and the equal attention groups ( $p = .43$ ).

**Mediation analyses.** Hypothesis 3 predicts that in the low-status attention groups (compared to the equal attention groups and the high-status attention groups), the positive effect of a leader's visual attention on group information elaboration will be mediated by disparity in member influence. We tested this mediation hypothesis with the PROCESS macro, specifying Model 4 (Hayes, 2013). As expected, the relative indirect effect of a leader's visual attention on group information elaboration was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -.39$ ,  $SE = .14$ , 95% bias-corrected CI =  $[-.70, -.16]$ ). Likewise, the relative indirect effect was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.25$ ,  $SE = .12$ ,

95% bias-corrected CI =  $[-.51, -.05]$ ). Thus, Hypothesis 3 was supported.

**Group performance.** To examine how a leader's visual attention affects group performance, we analyzed group performance, controlling for individuals' actual competence. As expected, there was a significant difference in group performance across the three groups ( $F[2, 106] = 6.54$ ,  $p < .01$ ,  $\eta^2 = .11$ ), controlling for individuals' actual competence using the average score.<sup>7</sup> Consistent with Hypothesis 4, in the low-status attention groups, group performance was better ( $M = 53.50$ ,  $SD = 13.94$ ) than in the equal attention groups ( $[M = 44.17$ ,  $SD = 11.44]$ ,  $F[1, 71] = 11.65$ ,  $p = .001$ ,  $\eta^2 = .14$ ), controlling for individuals' actual competence. Similarly, in the low-status attention groups, group performance was better than in the high-status attention groups ( $[M = 48.17$ ,  $SD = 10.91]$ ,  $F[1, 71] = 4.60$ ,  $p = .04$ ,  $\eta^2 = .06$ ), controlling for individuals' actual competence. Thus, the results demonstrated that a leader's greater visual attention toward a low-status member benefited the group's performance. Additional analyses showed that there was no significant difference in group performance between the high-status attention groups and the equal attention groups ( $F[1, 69] = 2.31$ ,  $p = .13$ ,  $\eta^2 = .03$ ), controlling for individuals' actual competence.

**Sequential mediation analyses.** Hypothesis 5 predicts that in the low-status attention groups (compared to the equal attention groups and the high-status attention groups), the positive effect of a leader's visual attention on group performance will be mediated in sequence by disparity in member influence and group information elaboration. We tested this two-step mediation hypothesis with the PROCESS macro, specifying Model 6 (Hayes, 2013). As expected, the relative indirect effect of a leader's

<sup>7</sup> Much like group performance, actual competence was determined by comparing individual rankings of the 15 desert survival items to expert rankings (e.g., Lafferty & Pond, 1974; Littlepage & Mueller, 1997; Littlepage et al., 1995). Additional analyses showed that there was no main effect of group type on actual competence ( $[\gamma 01 = -.87]$ ,  $t[108] = -.83$ , *ns*) and no interaction ( $[\gamma 11 = -.24]$ ,  $t[108] = -.24$ , *ns*), indicating there was no difference in individuals' actual competence across conditions. Since group members' actual competence is an individual-level outcome, whereas group performance is a group-level outcome, we first aggregated the actual competence of two members to create a group-level variable (after verifying that there was no significant difference in actual competence between group members). We then analyzed group performance, controlling for average actual competence.

visual attention on group performance was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -1.41$ ,  $SE = .64$ , 95% bias-corrected CI =  $[-2.93, -.39]$ ). Likewise, the relative indirect effect was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.91$ ,  $SE = .51$ , 95% bias-corrected CI =  $[-2.08, -.12]$ ). Thus, Hypothesis 5 was supported.

**Supplementary analysis of disparity in member influence.** After testing our hypotheses, we conducted a supplementary analysis to better understand how disparity in member influence is reduced when a leader provides greater positive visual attention to a low-status member. At the end of the experiment, we asked participants to rate their level of influence during the group discussion (e.g., Kilduff & Galinsky, 2013; “I feel like I led the group discussion,” “I contributed to the group discussion by making important decisions and suggestions,” and “My input during the discussion was influential” [ $\alpha = .78$ ] on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). We then examined how asymmetric influence patterns between high- and low-status members were reduced compared to the control condition (i.e., equal attention condition) by separately focusing on high- and low-status members’ influence. Specifically, to examine whether and how low-status members’ influence in the low-status attention groups shifted compared to that in the baseline groups, we compared low-status members’ influence in the low-status attention condition with their influence in the equal attention condition. Likewise, to examine whether and how high-status members’ influence in the low-status attention groups shifted compared to that in the baseline groups, we compared high-status members’ influence in the low-status attention condition with their influence in the equal attention condition.

These analyses revealed that low-status members’ influence in the low-status attention condition was significantly higher ( $M = 4.97$ ,  $SD = .86$ ) than their influence in the equal attention condition ( $[M = 4.46$ ,  $SD = .94]$ ,  $F[1, 72] = 5.92$ ,  $p = .02$ ,  $\eta^2 = .08$ ), whereas there was no difference in high-status members’ influence between the low-status attention condition ( $M = 4.92$ ,  $SD = .88$ ) and the equal attention condition ( $[M = 5.07$ ,  $SD = .94]$ ,  $F[1, 72] = .51$ ,  $p = .48$ ). These findings suggest that disparity in member influence is primarily reduced through a low-status member’s increased contribution and input, whereas a high-status member’s influence remains largely unchanged. In other words, when a leader gives

greater visual attention to a low-status member, the low-status member is more likely to speak up and make decisions and suggestions, which leads to the attenuation of asymmetric influence patterns between high- and low-status members.

Additional analyses demonstrated that there was no difference in low-status members’ influence between the high-status attention condition ( $M = 4.68$ ,  $SD = .74$ ) and the equal attention condition ( $[M = 4.46$ ,  $SD = .94]$ ,  $F[1, 70] = 1.13$ ,  $p = .29$ ). Similarly, there was no difference in high-status members’ influence between the high-status attention condition ( $M = 5.02$ ,  $SD = .88$ ) and the equal attention condition ( $[M = 5.07$ ,  $SD = .94]$ ,  $F[1, 70] = .07$ ,  $p = .80$ ).

**Robustness checks.** Employing the measure of self-rating individual influence in the supplementary analysis above, we conducted additional analyses to check the robustness of our findings using the main outcome variable (i.e., disparity in member influence based on observer-rated measures). Thus, we created a difference score by subtracting a low-status member’s self-rating score from a high-status member’s self-rating score within a team. Then, using an absolute value of the difference score, we reanalyzed the data.

Across the three groups, there was a significant difference in the disparity in member influence based on the self-rated measure ( $F[2, 107] = 5.75$ ,  $p < .01$ ,  $\eta^2 = .10$ ). In the low-status attention groups, disparity in member influence was lower ( $M = .61$ ,  $SD = .33$ ) than in the equal attention groups ( $[M = .89$ ,  $SD = .39]$ ,  $p < .01$ ) and in the high-status attention groups ( $[M = .79$ ,  $SD = .34]$ ,  $p = .09$ ), although this finding was not statistically significant. There was no significant difference in the disparity in member influence between the high-status attention groups and the equal attention groups ( $p = .45$ ).

Additionally, the relative indirect effect of a leader’s visual attention on information elaboration (through disparity in member influence) was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -.29$ ,  $SE = .11$ , 95% bias-corrected CI =  $[-.53, -.09]$ ) and was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.18$ ,  $SE = .09$ , 95% bias-corrected CI =  $[-.39, -.02]$ ). Further, the relative indirect effect of a leader’s visual attention on group performance (through disparity in member influence and information elaboration) was significant when we compared the low-status attention groups with the equal

attention groups ( $\beta = -1.23$ ,  $SE = .58$ , 95% bias-corrected CI =  $[-2.56, -.31]$ ) and was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.78$ ,  $SE = .44$ , 95% bias-corrected CI =  $[-1.83, -.08]$ ). Overall, the findings utilizing disparity in member influence based on the self-rated measure remained similar to the results utilizing disparity in member influence based on the observer-rated measure.

## DISCUSSION

Study 1 was designed to examine how a leader's visual attention affects disparities in member influence, group information processing, and performance in racially diverse groups. We found that when a Black member received greater visual attention from a leader, the disparity in member influence was lower than when both members received equal visual attention or when a White member received greater visual attention. We also found that when a Black member received greater visual attention from a leader, group members were more likely to discuss each other's diverse ideas and to integrate their implications more fully, compared to when both members received equal visual attention or when a White member received greater visual attention. Finally, we found that when a Black member received greater visual attention from a leader, group performance was better than when both members received equal visual attention or when a White member received greater visual attention. The sequential mediation analyses demonstrated that a leader's increased visual attention toward a Black member led to decreased disparity in member influence, which in turn led to increased group information elaboration, which ultimately resulted in better group performance in racially diverse groups.

## STUDY 2

Study 2 was designed to extend the results of Study 1 by pursuing two goals. The first was to replicate Study 1's findings by creating diverse groups based on a less readily observable characteristic (i.e., group members' educational background). Specifically, we created a group that included two members—one from an advanced program and the other from a regular program in a business school. By examining diverse groups based on a readily observable characteristic (i.e., race) in Study 1 and subsequently examining different types of diverse groups based on a less readily observable characteristic in

Study 2, we sought to replicate our findings in a different context.

The second goal of Study 2 was to examine our predictions in the context of a hidden-profile task. Hidden-profile tasks are referred to as "team tasks that contain a correct or best alternative, in which the information about these alternatives is distributed among team members in such a way that no team member can detect the best alternative by relying exclusively on his or her own information" (Tost et al., 2013: 1473). This task allowed us to more precisely capture one of the key mediators, group information elaboration, because group members solve the task only if they actively exchange and discuss each other's unique information and then pool the full information set held by each group member (Stasser & Stewart, 1992). We measured group information elaboration using an established coding scheme that was specifically designed for a hidden-profile task (Homan et al., 2007; van Ginkel & van Knippenberg, 2008).

## Participants and Task

The participants were 200 Asian undergraduates (66 male, 134 female) from a business school at a university in China. Half of the participants were from an advanced program, and the other half were from a regular program. To avoid the possibility that gender would affect the group dynamics, all groups, including their confederate leader, were matched based on gender (i.e., male groups or female groups), as in Study 1.

We used a modified version of the hidden-profile task, "PB technology, a group decision-making task," developed by Peterson (2001). This task involved a fictitious company, South Bay Mart, a moderate-sized supermarket chain that specializes in selling organic food products. South Bay Mart has experienced explosive growth and there has been a tremendous amount of friction among different divisions in terms of its marketing campaigns. More critically, the position of marketing director has remained open for the past three months, and as a result, several major marketing-related decisions have not been made. Participants were told they were vice presidents at South Bay Mart, and their task was to work with each other to recommend a new marketing director after reviewing a list of three candidates. They were then given information about the three candidates.

Following the procedures used by Stasser and Titus (1985), we modified a PB technology hidden-profile

task in which each group member received information that favored a different candidate. One participant was randomly given an information packet designed to persuade him or her to choose Candidate A as the best candidate for the position of marketing director. The other participant was randomly given an information packet designed to persuade him or her to choose Candidate B as the best candidate for the position. Although each member read an information packet that favored a different candidate, if all the information was considered during the group discussion, Candidate C would clearly be the best choice for the company.

### Procedure

This study consisted of four phases. In Phase 1, we first recruited two Asian confederates (i.e., one Asian male and one Asian female) to act as group leaders during the experiments. The confederate leaders memorized the script for the South Bay Mart task, which is a modified version of a hidden-profile task, and they were also trained to gaze at participants for the prescribed amounts of time, depending on the conditions. Following this, we recruited undergraduate students from a business school that has two different, well-established programs (i.e., an advanced program and a regular program). Entrance into the advanced program requires much higher entrance exam scores than entrance into the regular program. By recruiting group members from two distinct programs, we sought to create a diverse group in which each member's educational level was clearly distinguished, suggesting that a member in the advanced program was perceived to have higher status than a member in the regular program.

In Phase 2, after completing the consent form, one participant from the advanced program and one participant from the regular program were randomly paired and assigned to one of the three conditions: (a) the low-status attention condition, in which a member with a low-status diverse characteristic (i.e., a participant from the regular program) received greater visual attention from a leader than a member with a high-status diverse characteristic (i.e., a participant from the advanced program); (b) the high-status attention condition, in which a member with a high-status diverse characteristic received greater visual attention from a leader than a member with a low-status diverse characteristic; and (c) the equal attention condition, in which both participants from

different programs received an equal amount of visual attention from a leader.

To render the two group members' different programs clearly salient and visible, the members were introduced to each other by their program names. In addition, the name placards placed on the table clearly indicated each person's respective program affiliation. The overall procedure was identical to Study 1. While explaining the goals of the task and the guidelines to the group members, the confederate leader gave either unequal or equal visual attention to the members, depending on the assigned condition. As in Study 1, we used a cover story to establish a leader's credentials, highlighting his or her advanced education and leadership experience.

In Phase 3, each participant went to an individual workspace, reviewed all three candidate profiles, and individually chose the best candidate. Following this, the two participants were reunited and were then asked to select the best candidate as a group. We used this group decision to determine group performance at the end of the process. This group discussion was videotaped to assess each group's disparity in member influence and group information elaboration. Once the group had made a decision, the participants were each sent to an individual workspace and were then asked to complete a short questionnaire to assess their influence during a group discussion and to determine whether the manipulation of a leader's visual attention had been successful.

In Phase 4, the leader again joined the groups to discuss their decision and provide feedback. The leader asked the groups about their decision, including the reasons for their decision and their views on the other two candidates. The leader then provided positive comments about the decision, using words of affirmation such as "logical" and "well-supported." Next, we debriefed participants by providing a statement that explained the purpose of the study, as in Study 1. Finally, we provided a short form to participants and asked them to write down any additional thoughts or questions they may have had about the study.

### Measures

**Disparity in member influence.** We used the same coding scheme employed in Study 1 to measure the disparity in member influence. Two independent coders watched each group discussion and measured the disparity in member influence based



on the guidelines listed in Table 1.<sup>8</sup> Since two coders' ratings demonstrated good interrater reliability ( $ICC1 = .65$ ,  $ICC2 = .79$ ,  $p < .001$ ; mean  $r_{wg} = .79$ ), we averaged them to compute an overall score for disparity in member influence (Bliese, 2000; Klein & Kozlowski, 2000; LeBrenton & Senter, 2008).

**Group information elaboration.** As in Study 1, we measured group information elaboration by coding the videotapes of group discussions. Because we used a hidden-profile task, which means participants received unique information in Study 2, we measured group information elaboration based on the degree to which group members elaborated upon the unique information items adapted by previous researchers (Homan et al., 2007; van Ginkel & van Knippenberg, 2008). Specifically, we modified the coding scheme developed by Homan and colleagues (2007) to assess how attentively group members processed and integrated each information item mentioned during a group discussion. In other words, coders received a list of unique information items first (a total of 18), and while watching each video clip, they applied the coding scheme below to each information item mentioned by a member and scored each item using a five-point scale. For example, if one member mentioned an information item (e.g., "He is emotionally unstable") during a group discussion, coders assessed the degree to which the group elaborated upon that particular item and scored it.

Below is the coding scheme we used to measure group information elaboration. A higher score reflects an information item that was elaborated upon in greater detail during a group discussion. A score of 1 (*not attentive*) was assigned when one member mentioned an information item and the other member did not react to it. A score of 2 (*slightly attentive*) was assigned when one member mentioned an information item and the other member simply reacted to it (e.g., by nodding or by saying "okay," "uh-huh," or "yeah"). A score of 3 (*moderately attentive*) was assigned when one member mentioned an information item and the other member clearly responded by asking questions or restating what his or her partner had said (e.g., "Is he

emotional or emotionally unstable?"). A score of 4 (*attentive*) was assigned when one member mentioned an information item and the group made a judgment or conclusion about whether something was important or problematic (e.g., "Being emotionally unstable should be a big problem"). Finally, a score of 5 (*very attentive*) was assigned when one member mentioned an information item and the group combined this information with another piece of information and drew an integrated conclusion or judgment (e.g., "If he is emotionally unstable *and* is occasionally dominating, he might not be able to develop a good relationship with team members, right? It would ultimately hamper team building and morale.")

A second set of two independent coders, who were blind to the hypotheses and experimental conditions, rated the level of information elaboration per each information item on a five-point scale (from 1 to 5). We then computed the sum of each information elaboration score for the 18 unique information items to measure total elaboration. Because the average ICC for the two coders was .88, we averaged their ratings.

**Group performance.** Group decision performance was based on whether the group chose the correct candidate (Candidate C). This was a dichotomous dependent variable (1 = *correct*, 0 = *not correct*).

## Results

Table 3 presents the means, standard deviations, and correlations.

**Manipulation checks.** The manipulation of the leader's attention was successful. In the equal attention condition, all but two of the participants reported that they and their partner had received the same amount of attention from the leader. In the unequal attention conditions (i.e., low-status attention and high-status attention conditions), all but two of the participants reported that they and their partner had not received the same amount of attention from the leader. All the participants who said they had received unequal attention from the leader also answered the following question: "If not, how much attention do you think you received from the leader? (1 = *none at all*; 7 = *very much*)."

In the low-status attention condition, members with a low-status diverse characteristic (i.e., participants from the regular program) reported having received greater attention ( $M = 5.06$ ,  $SD = .77$ ) than members with a high-status diverse characteristic (i.e., participants from the advanced program) ( $M = 3.79$ ,

<sup>8</sup> Because seven participants from a different group indicated on the consent form that they did not want to be videotaped during the group discussion, we did not record their discussion. In addition, two groups' discussions were not successfully recorded because of technical issues. Thus, the final sample for disparity in member influence and group information elaboration comprised 89 groups.

**TABLE 3**  
Means, Standard Deviations, and Correlations in  
Study 2

Variable	Mean	SD	1	2	3
1. Group Type	1.00	.81			
2. Disparity in Member Influence	2.59	.99	.28*		
3. Group Information Elaboration	19.72	9.28	-.25 <sup>†</sup>	-.45**	
4. Group Performance	.48	.50	-.18	-.38**	.46**

<sup>†</sup>  $p < .05$

\*  $p < .01$

\*\*  $p < .001$

$SD = .82$ ],  $F[1, 62] = 41.09$ ,  $p < .001$ ,  $\eta^2 = .40$ ). Similarly, in the high-status attention condition, members with a high-status diverse characteristic reported having received greater attention ( $M = 5.22$ ,  $SD = .75$ ) than members with a low-status diverse characteristic ( $[M = 3.97$ ,  $SD = .82]$ ,  $F[1, 62] = 40.33$ ,  $p < .001$ ,  $\eta^2 = .39$ ).

During the debriefing session, we learned that two participants (each from a different group) suspected that the leader's attention had been contrived. As a result, these two groups were excluded from subsequent analyses. The final sample included 196 participants.<sup>9</sup> The number of low-status attention groups was 32, the number of equal attention groups was 34, and the number of high-status attention groups was 32. We coded low-status attention groups as 0, equal attention groups as 1, and high-status attention groups as 2. Initial analyses included gender, but significant gender effects were not observed, so we excluded gender from the analyses.

**Disparity in member influence.** There was a significant difference in disparity in member influence across the three groups,  $F[2, 86] = 7.64$ ,  $p = .001$ ,  $\eta^2 = .15$ ). Consistent with Hypothesis 1, the post hoc analyses indicated that in the low-status attention groups, disparity in member influence was lower ( $M = 2.08$ ,  $SD = .93$ ) than in the equal attention groups ( $[M = 2.97$ ,  $SD = .73]$ ,  $p = .001$ ) and in the high-status attention groups ( $[M = 2.75$ ,  $SD = 1.08]$ ,  $p = .02$ ). There was no significant difference in disparity in member influence between the high-status attention groups and the equal attention groups ( $p = .65$ ).

<sup>9</sup> The pattern and significance ( $p < .05$ ) of all of the findings remained the same when we included participants who were excluded from the analyses.

**Group information elaboration.** There was a significant difference in group information elaboration across the three groups ( $F[2, 86] = 4.69$ ,  $p = .01$ ,  $\eta^2 = .10$ ). Consistent with Hypothesis 2, the post hoc analyses indicated that in the low-status attention groups, group information elaboration was higher ( $M = 23.65$ ,  $SD = 9.66$ ) than in the equal attention groups ( $[M = 17.13$ ,  $SD = 8.23]$ ,  $p = .02$ ) and in the high-status attention groups ( $[M = 18.16$ ,  $SD = 8.76]$ ,  $p = .05$ ). There was no difference in group information elaboration between the high-status attention groups and the equal attention groups ( $p = .90$ ).

**Mediation analyses.** Hypothesis 3 predicts that in the low-status attention groups (compared to the equal attention groups and the high-status attention groups), the positive effect of a leader's visual attention on group information elaboration will be mediated by disparity in member influence. We tested this mediation hypothesis with the PROCESS macro, specifying Model 4 (Hayes, 2013). As expected, the relative indirect effect of a leader's visual attention on group information elaboration was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -3.18$ ,  $SE = 1.24$ , 95% bias-corrected CI =  $[-5.91, -1.11]$ ). Likewise, the relative indirect effect was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -2.40$ ,  $SE = 1.21$ , 95% bias-corrected CI =  $[-5.15, -.42]$ ). Thus, Hypothesis 3 was supported.

**Group performance.** There was a significant difference in group performance across the three groups ( $\chi^2 [2, n = 98] = 6.41$ ,  $p = .04$ ). Consistent with Hypothesis 4, in the low-status attention groups (44.7%), a higher percentage of groups chose the right candidate compared to the equal attention groups (25.5%) ( $\chi^2 [1, n = 66] = 6.07$ ,  $p = .01$ ) and the high-status attention groups (29.8%) ( $\chi^2 [1, n = 64] = 3.09$ ,  $p = .08$ ), although this finding was not significant. Additional analyses revealed that there was no difference in group performance between the high-status attention groups and the equal attention groups ( $\chi^2 [1, n = 66] = .49$ ,  $p = .48$ ).

**Sequential mediation analyses.** To replicate our underlying mechanism on the effect of a leader's visual attention on group performance, we tested the hypothesized model with the dichotomous dependent variable (i.e., whether the group chose the correct candidate). To accomplish this, we employed the PROCESS macro version 3.3, specifying Model 6 (Hayes, 2013), as in Study 1. We would like to note that PROCESS macro version 3.3 allows

for the use of dichotomous outcome variables in any model.

As expected, the relative indirect effect of a leader's visual attention on group performance was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -.31$ ,  $SE = .18$ , 95% bias-corrected CI =  $[-.77, -.08]$ ). Likewise, the relative indirect effect was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.23$ ,  $SE = .16$ , 95% bias-corrected CI =  $[-.64, -.03]$ ). Thus, Hypothesis 5 was supported.

**Supplementary analysis of disparity in member influence.** To better understand how disparity in member influence was reduced in the low-status attention condition, at the end of the experiment, we asked participants to rate their level of influence during the group discussion using the same items ( $\alpha = .73$ ) employed in Study 1. Consistent with the findings in Study 1, low-status members' influence in the low-status attention condition was significantly higher ( $M = 4.95$ ,  $SD = .92$ ) than their influence in the equal attention condition ( $[M = 4.37$ ,  $SD = .94]$ ,  $F[1, 64] = 6.31$ ,  $p = .02$ ,  $\eta^2 = .09$ ), whereas there was no difference in high-status members' influence between the low-status attention condition ( $M = 4.90$ ,  $SD = .74$ ) and the equal attention condition ( $[M = 5.01$ ,  $SD = .93]$ ,  $F[1, 64] = .30$ ,  $p = .58$ ).

These findings indicate that in the low-status attention condition, disparity in member influence is reduced primarily through low-status members' increased contributions and input, whereas high-status members' influence remains largely unchanged. In other words, when a leader gives greater visual attention to a low-status member, the low-status member's participation and engagement are likely to be boosted, which in turn leads to the attenuation of asymmetric influence patterns between high- and low-status members and their ultimate reduction.

Additional analyses showed that there was no difference in low-status members' influence between the high-status attention condition ( $M = 4.52$ ,  $SD = .76$ ) and the equal attention condition ( $[M = 4.37$ ,  $SD = .94]$ ,  $F[1, 64] = .49$ ,  $p = .49$ ). Similarly, there was no difference in high-status members' influence between the high-status attention condition ( $M = 5.04$ ,  $SD = .72$ ) and the equal attention condition ( $[M = 5.01$ ,  $SD = .93]$ ,  $F[1, 64] = .02$ ,  $p = .88$ ).

**Robustness checks.** As in Study 1, we conducted additional analyses to check for robustness using the measure of self-rating individual influence. Across the three groups, there was a significant difference in

disparity in member influence based on the self-rated measure ( $F[2, 95] = 4.64$ ,  $p = .01$ ,  $\eta^2 = .09$ ). In the low-status attention groups, disparity in member influence was lower ( $M = .70$ ,  $SD = .37$ ) than in the equal attention groups ( $[M = 1.07$ ,  $SD = .60]$ ,  $p = .01$ ) and in the high-status attention groups ( $[M = .98$ ,  $SD = .53]$ ,  $p = .08$ ), although this finding was not statistically significant. There was no significant difference in disparity in member influence between the high-status attention groups and the equal attention groups ( $p = .75$ ).

Additionally, the relative indirect effect of a leader's visual attention on information elaboration (through disparity in member influence) was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -2.16$ ,  $SE = 1.01$ , 95% bias-corrected CI =  $[-4.43, -.51]$ ) and was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -1.87$ ,  $SE = .88$ , 95% bias-corrected CI =  $[-3.77, -.32]$ ). Further, the relative indirect effect of a leader's visual attention on group performance (through disparity in member influence and information elaboration) was significant when we compared the low-status attention groups with the equal attention groups ( $\beta = -.20$ ,  $SE = .14$ , 95% bias-corrected CI =  $[-.59, -.04]$ ) and was also significant when we compared the low-status attention groups with the high-status attention groups ( $\beta = -.17$ ,  $SE = .13$ , 95% bias-corrected CI =  $[-.51, -.02]$ ). Overall, the findings using disparity in member influence based on the self-rated measure remain similar to the results obtained using disparity in member influence based on the observer-rated measure, as in Study 1.

## DISCUSSION

The results of Study 2 support our hypotheses and theoretical model, illustrating that a leader's greater visual attention toward a low-status member can reduce disparity in member influence, leading to enhanced group information elaboration that in turn leads to increased group performance in educationally diverse groups. These findings suggest that a leader's greater visual attention toward a low-status member may prove beneficial to group functioning and group performance in a diverse group where disparities in member influence are likely to emerge. These findings also support the generalizability of the effects of a leader's visual attention on group processes and performance found in Study 1 in light of

the fact that similar results were identified in the different diversity context of Study 2.

## GENERAL DISCUSSION

Scholars, leaders, and practitioners have long been interested in how to successfully manage diversity within an organization (Kulik, 2014; van Knippenberg et al., 2004). The current research focuses on the important phenomenon of disparity in member influence, which often occurs among demographically dissimilar members of a group, and the negative effects it can bring about, including the disruption of group processes. The goal of this research is to investigate how to attenuate disparities between members in diverse groups and consequently enhance group processes through information elaboration by focusing on the role of a leader's nonverbal behavior: specifically, a leader's visual attention.

Across the two studies, we consistently found that a leader's greater visual attention toward a low-status member attenuated disparity in member influence in situations where high-status members tend to wield greater influence in group decision-making processes. Our sequential mediation analyses demonstrated that a leader's greater visual attention toward a low-status member attenuated disparity in member influence, leading to better group information elaboration which in turn led to enhanced group performance in collective decision-making tasks. Our supplementary analyses revealed that a leader's greater visual attention toward a low-status member reduced disparity in member influence, primarily by increasing the low-status member's influence. A particularly notable finding across the two studies is that long after group leaders had left the scene, their early visual attention still had significant consequences for group processes and performance.

## Theoretical Contributions

The current research offers several theoretical contributions to the literature on diversity, group decision-making processes, and group performance. First, this study extends our understanding of how diversity often undermines group processes and organizational outcomes. As we addressed in the introduction, in diverse groups, members' demographic characteristics tend to shape status differentials between them, as well as asymmetric patterns of influence, in which high-status members tend to have greater influence than low-status members (Berger et al., 1980; Kilduff & Galinsky, 2013;

Ridgeway & Correll, 2006; van Knippenberg & Schippers, 2007). Importantly, real-world examples—such as NASA's Challenger tragedy and the unequal communication styles evidenced in hospitals (for example, the Johns Hopkins case)—suggest that this asymmetric pattern of influence between members may hinder the elaboration of task-relevant information that group members bring to the table, which is critical for optimal group performance.

Despite the potential negative impacts of asymmetric influence patterns on group functioning, especially in collective decision-making tasks, diversity scholars have remained largely silent on this important issue (Chattopadhyay et al., 2020; Phillips et al., 2009). In the current research, we focus on this critical phenomenon, which often occurs in diverse groups, and seek to identify how disparity in member influence affects group functioning through information elaboration and group performance. Specifically, across the two studies, we first demonstrate that members' demographic characteristics (i.e., race and educational background) create asymmetric influence patterns in diverse groups working on collective decision-making tasks. Additionally, we identify the negative effects of these unequal influential patterns on group decision-making processes, showing that such patterns can disrupt information elaboration processes and, ultimately, group performance. By demonstrating that diversity often creates disparity in member influence and that this unequal influence pattern hinders information-elaboration processes, we provide more comprehensive explanations for why diversity often undermines group processes and performance.

In addition, we contribute to the literature on diversity and group functioning by identifying constructive countermeasures to attenuate asymmetric influence patterns among group members. To the best of our knowledge, our research, which focuses on a leader's gazing behavior, is the first to offer a potential solution that will effectively shift disparity in member influence in diverse groups. Although the implementation of procedural systems may yield substantial improvements in group communication styles, such interventions often require a significant amount of time and effort as well as financial investment to implement in the workplace (Kelly & Moen, 2007). In contrast, our intervention—which is based on a leader's nonverbal behavior, specifically a leader's eye gaze—is capable of providing a relatively simple and effective strategy that can reduce disparity in member influence without imposing an undue



burden on the person or organization involved. Employing two diverse group studies, we consistently demonstrate that a leader's increased visual attention toward low-status members in such groups attenuates asymmetric influence patterns. The intervention we developed represents a direct response to calls for potential solutions that will effectively embrace and successfully manage diversity (Kulik, 2014), offering a simple but useful strategy to help leaders create a more open and equal environment in diverse groups.

Related to the contribution above, we further contribute to the literature on group decision-making processes and group performance by systematically investigating why disparities in member influence in diverse groups should be attenuated, especially in collective decision-making tasks. In the process of our investigation, we employed two approaches: (a) a theoretical approach, by combining ideas from the CEM and the social cognition literature to enhance our understanding of how attenuated disparities in member influence enhance group information elaboration and outcomes in a collective decision-making task; and (b) an empirical approach, by exploring the mechanisms underlying the positive impact of reduced disparity in member influence on group information elaboration and performance. By testing the two-step mediation processes, we empirically demonstrate that the attenuation of disparity in member influence (driven by a leader's greater visual attention toward a low-status member) improves group information elaboration, which in turn enhances performance in diverse groups. By examining this underlying mechanism and exploring how reduced disparity in member influence in diverse groups positively affects group decision-making processes and team performance, we extend our understanding of why the attenuation of asymmetric influence patterns in diverse groups is critical to the integrity and effectiveness of collective decision-making processes. Importantly, our study will help diversity scholars and leaders in real-world organizations understand the beneficial effects of attenuating asymmetric influence patterns in diverse groups engaged in collective decision-making processes.

Moreover, we advance the literature on gazing behavior by investigating the effects of leaders' unequal distribution of visual attention in a group context. Although ample evidence demonstrates that relative rather than absolute differences between people significantly affect their perceptions and behavior (Bazerman, Loewenstein, & White, 1992; Medvec, Madey, & Gilovich, 1995), our field lacks an

understanding of the patterns of unequal visual attention in a group context. Previous research on gazing behavior has primarily examined how a person's absolute amount of visual attention (direct gaze) or lack thereof (averted gaze) affects recipients' perceptions (Khalid, Deska, & Hugenberg, 2016; Wesselmann, Cardoso, Slater, & Williams, 2012; Wirth et al., 2010). Although recent research has examined unequal gaze distribution in a group context, this research has focused on the circumstances under which unequal gaze distribution among members occurs rather than how the unequal gaze distribution of high-status members, such as leaders, affects group dynamics and outcomes (Koch, Baehne, Kruse, Zimmermann, & Zumbach, 2010). We sought to fill this gap in the extant literature and consequently advance our knowledge of gazing behavior by investigating how a leader's unequal visual attention toward group members affects members' influence patterns, information elaboration processes, and overall (group) performance.

Furthermore, we sought to make a methodological contribution by developing an observational measure to capture the degree of disparity in group members' influence based on a suggestion from Harrison and Klein (2007). As noted previously, although the diversity literature and real-world examples (e.g., NASA's Challenger tragedy) have implied that disparity in member influence in demographically diverse groups occurs often and that this unequal pattern may disrupt group functioning, we believe this important phenomenon has not been systematically examined, partly because of the lack of measurement criteria. In future research, our measure for capturing the degree of disparity in member influence may serve as a guide for investigating this concept in more complex and dynamic group contexts.

A leader's gazing behavior, as derived from cognitive and biological science, is an important but neglected topic in the management domain. The importance of investigating nonverbal behavior such as eye gaze in an organizational context is implicit in the concluding arguments of Bonaccio and colleagues (2016), who contended that systematically incorporating nonverbal cues such as gazing behaviors into organizational research offers a number of practical implications. They further argued that a better understanding of nonverbal behavior and communication will facilitate the development of evidence-based tools that will help managers address a broad array of challenges in the workplace. In light of the fact that a leader's greater visual

attention can signal his or her recognition of, and attention toward, a certain group (Friedman, 1967; Jones & Cooper, 1971), and the fact that members tend to be sensitive about their leader's recognition and approval (Rhoades & Eisenberger, 2002), it is especially important to understand how a leader's visual attention toward a certain member can affect group dynamics and processes. Yet, despite the potential impact of nonverbal behaviors in the workplace, organizational researchers have not theoretically developed or empirically tested how these behaviors, including gaze, affect group processes and group outcomes in organizations (Bonaccio et al., 2016). As Bonaccio and colleagues (2016: 1045) aptly pointed out, "it is surprising to notice that management scholars have lagged behind in understanding [nonverbal cues such as gazing behavior]." By introducing this topic to the management field, we seek to extend our understanding of visual attention in an organizational context and provide a cross-disciplinary perspective of the effects of visual attention on group dynamics and group outcomes.

### Practical Implications

From a practical standpoint, the current research has important implications for leadership, group effectiveness, and group performance in real-world organizations. Given that employees frequently join ad hoc groups in today's organizations and are motivated to follow the direction of their leader's gaze, our research findings have particularly important implications for leaders. One critical implication is that a leader's gazing behavior (i.e., his or her visual attention toward a member) can have significant consequences for group dynamics and group performance. For example, if a group leader provides more positive visual attention to a low-status employee in a diverse group, this attention pattern can attenuate disparities in member influence that are often based on employees' demographic differences. This in turn leads to increased group information elaboration and enhanced group performance in collective decision-making tasks as a result.

As noted previously, although people may not always be aware of their gazing patterns because gazing behavior is subtle and often subconscious, they can become aware of, and improve on, such behavior through simple interventions (e.g., watching videos of themselves and attending sensitivity training programs) (Alberts et al., 2007; Ellsberg, 2010). By consciously practicing appropriate gazing behavior

through training and personal development, leaders can create a more equalized group atmosphere and consequently achieve better group outcomes in collective decision-making tasks. We believe that if leaders understand the power of eye gaze—that is, if leaders recognize that eye gaze is a clear indicator of the level and quality of a gazer's attention (Emery, 2000)—and seek to recognize and modify how they distribute their visual attention during initial interactions with group members (e.g., when a new group project begins), they can create a better work environment in which all group members will be empowered to voice their own opinions and integrate the diverse perspectives of all members.

### Limitations and Future Directions

The current research is subject to a number of limitations that point to directions for future research. First, it would be interesting to investigate group size as a potential moderator. In this study, to examine the role of a leader's visual attention in a simple, straightforward setting, we defined a group as a unit of three persons, comprising two group members and a leader. It would be worthwhile to examine the effects of a leader's visual attention in larger groups to gain a better understanding of the complex group dynamics a leader's visual attention may help to create. It is possible that such dynamics will differ in larger groups in which individuals who receive less visual attention from a leader may form coalitions against individuals who receive more visual attention. In a related vein, it would be useful to examine the impact of a leader's visual attention in multicultural teams, where members are not always in the same physical location. Although the current research focuses on face-to-face communications, increasingly diverse teams in contemporary organizations often work across time, space, and different communication media. This global context may influence the role of a leader's visual attention. It would be interesting to investigate whether a leader's visual attention toward group members is more or less important in these contexts.

In addition, the groups we examined in the current research were newly formed and were interacting with each other for the first time. Our examination was based on the assumption that all group members, including the group leader, would share the same perceptions about diversity characteristics. However, determining who should receive greater visual attention in a group requires leaders and group members to agree on what the current

demographic characteristics reflect with respect to potential disparity of influence. In other words, it is possible that the perceptions of leaders and group members may not always be aligned. For instance, a low-status member may have strong social connections, of which the leader is unaware, that boost his or her opportunities to influence group decision-making processes. Future research should investigate the contextual factors that could influence perceptions of demographic characteristics to better establish the conditions under which the effects of a leader's visual attention in groups may be strengthened or mitigated. In a related vein, it would be worthwhile to examine a leader's demographic characteristics as a potential moderator. For example, what happens when the leader is a minority or a female overseeing an all-male team? Future research could investigate how a leader's demographic characteristics influence the effects of his or her visual attention on group dynamics.

Furthermore, the purpose of this research was to examine how to attenuate asymmetric influence patterns among members in diverse groups. Our central concern was whether a leader's visual attention (i.e., a leader's greater visual attention toward a low-status member) could reduce asymmetric influence patterns among members and, if so, how this shift subsequently affects group processes and outcomes. Thus, focusing on group-level outcomes with a between-team design was useful in extending our knowledge regarding how a leader's visual attention affects disparity in member influence, group information elaboration, and group performance. It would also be interesting to investigate how a leader's visual attention affects individual-level outcomes using a within-team design. Although we conducted supplementary analyses and examined individual members' influence to understand how disparity in member influence was reduced, one potential consideration for future research would be a thorough examination of how differences between members are diminished when a leader provides greater visual attention to a low-status member, focusing on individual-level outcomes, such as individual perceptions, employing a within-team design.

Regarding individual-level outcomes, we would like to note that in the analyses of the robustness check, the difference scores based on individual members' self-rating of influence did not completely capture the *disparity* in member influence. That is, the self-rating influence measure is based on how individuals perceive their own behavioral influence

without comparing it to their partner's behavioral influence, whereas our observer-rated disparity in member influence (based on videotapes) was based on a comparison between the two group members. Although the findings from the difference scores among individuals' self-rating of influence are similar to the results from observer-rated disparity in member influence in our studies, it would be interesting to investigate systematically whether individual members' perceptions align with, or differ from, group dynamics captured by observers when members receive a different level of visual attention from a leader.

Finally, the current study examines the impact of a leader's visual attention on group dynamics using tasks of relatively short duration. It remains to be seen whether and under what conditions the effects of visual attention are maintained, diminished, or even strengthened over time. It is possible that the effects of visual attention may be stronger over time; that is, there could be a spiraling effect. For example, visual attention might encourage members of a group who receive more attention to provide greater input to the group, which in turn encourages greater visual attention toward those members. In a related vein, the current study focuses on collective decision-making tasks (i.e., a ranking task and a hidden-profile task) to examine the elaboration of diverse perspectives and information during discussions, as well as subsequent performance. Whether the patterns generalize to different types of tasks, such as more structured, repetitive, effort-oriented tasks or tasks requiring coordination rather than information elaboration, could be a valuable topic for future research. It would be interesting to examine whether a leader's visual attention toward group members is more or less important according to the nature of the task.

## CONCLUSION

Eye gaze is a fundamental and potent force in face-to-face interactions because it signals attention. As one business analyst noted, "if the boss looks at you longer than your co-workers during conversations or meetings, it may be a sign your star is rising" (Shellenbarger, 2013). By providing greater visual attention to low-status members, leaders could nonverbally support and encourage them, thereby creating a more equalized communication atmosphere that proves beneficial to the group as a whole. Because individuals are instinctively motivated to follow a leader's gazing behavior, it is important to

understand how this subtle visual attention from a leader, which is almost invariably under the leader's control, can affect group dynamics and performance in diverse groups.

## REFERENCES

- Alberts, J., Nakayama, T. K., & Martin, J. N. 2007. *Human communication in society*. Boston, MA: Allyn-Bacon.
- Ambady, N., & Skowronski, J. 2008. *First impressions*. New York, NY: Guilford.
- Anderson, C., & Kilduff, G. J. 2009. Why do dominant personalities attain influence in face-to-face groups? The competence-signaling effects of trait dominance. *Journal of Personality and Social Psychology*, 96: 491–503.
- Antonsen, S. 2009. Safety culture and the issue of power. *Safety Science*, 47: 183–191.
- Argyle, M. 2013. *Bodily communication*. London, England: Routledge.
- Argyle, M., & Cook, M. 1976. *Gaze and mutual gaze*. Cambridge, England: Cambridge University Press.
- Argyle, M., & Ingham, R. 1972. Gaze, mutual gaze, and proximity. *Semiotica*, 1: 32–49.
- Baron-Cohen, S. 1995. *Mindblindness: An essay on autism and theory of mind*. Cambridge, MA: MIT Press.
- Bazerman, M. H., Loewenstein, G. F., & White, S. B. 1992. Reversals of preference in allocation decisions: Judging an alternative versus choosing among alternatives. *Administrative Science Quarterly*, 37: 220–240.
- Bedi, N., & McGrory, K. 2018, December 29. Johns Hopkins wrote the rules on patient safety. But its hospitals don't always follow them. *Tampa Bay Times*. Retrieved from <https://projects.tampabay.com/projects/2018/investigations/heartbroken/johns-hopkins-patient-safety>
- Berger, J., Rosenholtz, S. J., & Zelditch, M., Jr. 1980. Status organizing processes. *Annual Review of Sociology*, 6: 479–508.
- Berger, J., & Zelditch, M., Jr. 1985. *Status, rewards, and influence*. San Francisco, CA: Jossey-Bass.
- Birmingham, E., Bischof, W. F., & Kingstone, A. 2008. Social attention and real-world scenes: The roles of action, competition and social content. *Quarterly Journal of Experimental Psychology*, 61: 986–998.
- Bliese, P. D. 2000. Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations: Foundations, extensions and new directions*: 349–381. San Francisco, CA: Jossey-Bass.
- Bonaccio, S., O'Reilly, J., O'Sullivan, S. L., & Chiochio, F. 2016. Nonverbal behavior and communication in the workplace: A review and an agenda for research. *Journal of Management*, 42: 1044–1074.
- Bunderson, J. S. 2003. Recognizing and utilizing expertise in work groups: A status characteristics perspective. *Administrative Science Quarterly*, 48: 557–591.
- Burgoon, J. K., Guerrero, L. K., & Manusov, V. 2011. Nonverbal signals. In M. L. Knapp & J. Daly (Eds.), *Handbook of interpersonal communication*: 239–280. Thousand Oaks, CA: SAGE.
- Chattopadhyay, P., Finn, C., & Ashkanasy, N. 2010. Affective responses to professional dissimilarity: A matter of status. *Academy of Management Journal*, 53: 808–826.
- Chattopadhyay, P., George, E., Li, J., & Gupta, V. 2020. Geographical dissimilarity and team member influence: Do emotions experienced in the initial team meeting matter? *Academy of Management Journal*, 63: 1807–1839.
- Chattopadhyay, P., George, E., & Ng, C. 2011. An uncertainty reduction model of relational demography. *Research in Personnel and Human Resources Management*, 30: 219–251.
- De Dreu, C. K. W. 2007. Cooperative outcome interdependence, task reflexivity, and team effectiveness: A motivated information processing perspective. *The Journal of Applied Psychology*, 93: 628–638.
- Dulebohn, J., Bommer, W., Liden, R., Brouer, R., & Ferris, G. 2012. A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, 38: 1715–1759.
- Edinger, J. A., & Patterson, M. L. 1983. Nonverbal involvement and social control. *Psychological Bulletin*, 93: 30–56.
- Ellsberg, M. 2010. *The power of eye contact: Your secret for success in business, love, and life*. New York, NY: HarperCollins.
- Emery, N. J. 2000. The eyes have it: The neuroethology, function and evolution of social gaze. *Neuroscience and Biobehavioral Reviews*, 24: 581–604.
- Farh, C. I. C., Lanaj, K., & Ilies, R. 2017. Resource-based contingencies of when team-member exchange helps member performance in teams. *Academy of Management Journal*, 60: 1117–1137.
- Fiske, S. T. 2000. Stereotyping, prejudice, and discrimination at the seam between the centuries: Evolution, culture, mind, and brain. *European Journal of Social Psychology*, 30: 299–322.
- Fiske, S. T., & Taylor, S. E. 1991. *Social cognition*. New York, NY: McGraw-Hill.



- Foulsham, T., Cheng, J. T., Tracy, J. L., Henrich, J., & Kingston, A. 2010. Gaze allocation in a dynamic situation: Effects of social status and speaking. *Cognition*, 117: 319–331.
- Friedman, N. 1967. *The social nature of psychological research: The psychological experiment as a social interaction*. New York, NY: Basic Books.
- Frischen, A., Bayliss, A. P., & Tipper, S. P. 2007. Gaze cueing of attention: Visual attention, social cognition, and individual differences. *Psychological Bulletin*, 133: 694–724.
- Garrett, T. 2004. Whither Challenger, wither Columbia: Management decision making and the knowledge analytic. *American Review of Public Administration*, 34: 389–402.
- Gawande, A. 2010. *The checklist manifesto: How to get things right*. New York, NY: Metropolitan Books.
- Gilson, L. L., & Shalley, C. E. 2004. A little creativity goes a long way: An examination of teams' engagement in the creative process. *Journal of Management*, 30: 453–470.
- Goffman, E. 1963. *Behavior in public places*. New York, NY: Free Press.
- Gomez, C., & Rosen, B. 2001. The leader-member exchange as a link between managerial trust and employee empowerment. *Group & Organization Management*, 26: 53–69.
- Hall, J. A., Bernieri, F. J., & Carney, D. R. 2005. Nonverbal behavior and interpersonal sensitivity. In J. A. Harrigan, R. Rosenthal, & K. R. Scherer (Eds.), *The new handbook of methods in nonverbal behavior research*: 237–281. Oxford, England: Oxford University Press.
- Hargadon, A., & Bechky, B. 2006. When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science*, 17: 484–500.
- Harrison, D., & Klein, K. 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32: 1199–1228.
- Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis a regression-based approach*. New York, NY: The Guilford Press.
- Henderson, J. M. 2003. Human gaze control during real-world scene perception. *Trends in Cognitive Sciences*, 7: 498–504.
- Hoefer, I. J., van Knippenberg, D., van Ginkel, W. P., & Barkema, H. G. 2012. Fostering team creativity: Perspective taking as key to unlocking diversity's potential. *Journal of Applied Psychology*, 97: 982–996.
- Homan, A. C., Hollenbeck, J. R., Humphrey, S. E., van Knippenberg, D., Ilgen, D. R., & Van Kleef, G. A. 2008. Facing differences with an open mind: Openness to experience, salience of intra-group differences, and performance of diverse work groups. *Academy of Management Journal*, 51: 1204–1222.
- Homan, A. C., van Knippenberg, D., Van Kleef, G. A., & De Dreu, C. K. W. 2007. Bridging faultlines by valuing diversity: Diversity beliefs, information elaboration, and performance in diverse work groups. *Journal of Applied Psychology*, 92: 1189–1199.
- Jehn, K. A., Northcraft, G. B., & Neale, M. A. 1999. Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly*, 44: 741–763.
- Jones, R. E., & Cooper, J. 1971. Mediation of experimenter effects. *Journal of Personality and Social Psychology*, 20: 70–74.
- Kelly, E., & Moen, P. 2007. Rethinking the clockwork of work: Why schedule control may pay off at work and home. *Advances in Developing Human Resources*, 9: 487–506.
- Khalid, S., Deska, J. C., & Hugenberg, K. 2016. The eyes are the windows to the mind: Direct eye gaze triggers the ascription of others' minds. *Personality and Social Psychology Bulletin*, 42: 1666–1677.
- Kilduff, G. J., & Galinsky, A. D. 2013. From the ephemeral to the enduring: How approach-oriented mindsets lead to greater status. *Journal of Personality and Social Psychology*, 105: 816–831.
- Klein, K., & Kozlowski, S. 2000. *Multilevel theory, research and methods in organizations*. San Francisco, CA: Jossey-Bass.
- Kleinke, C. L. 1986. Gaze and eye contact: A research review. *Psychological Bulletin*, 1: 78–100.
- Knapp, M., & Hall, J. 2009. *Nonverbal communication in human interaction* (7th ed.). Boston, MA: Cengage Learning.
- Koch, S., Baehne, C., Kruse, C., Zimmermann, G., & Zumbach, L. 2010. Visual dominance and visual egalitarianism: Individual and group-level influences of sex and status in group interactions. *Journal of Nonverbal Behavior*, 34: 137–153.
- Kulik, C. T. 2014. Working below and above the line: the research-practice gap in diversity management. *Human Resource Management Journal*, 24: 129–144.
- Kulik, C. T., Perera, S., & Cregan, C. 2016. Engage me: The mature-age worker and stereotype threat. *Academy of Management Journal*, 59: 2132–2156.
- Lafferty, J. C., & Pond, A. W. 1974. *Desert survival situation*. Plymouth, MI: Human Synergistics.

- Larson, J. R. 2007. Deep diversity and strong synergy: Modeling the impact of variability in members' problem-solving strategies on group problem-solving performance. *Small Group Research*, 38: 413–436.
- Lavie, N. 1995. Perceptual load as a necessary condition for selective attention. *Journal of Experimental Psychology: Human Perception and Performance*, 21: 451–468.
- LeBrenton, J. M., & Senter, J. L. 2008. Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11: 815–852.
- Lerner, J. S., & Tetlock, P. E. 1999. Accounting for the effects of accountability. *Psychological Bulletin*, 125: 255–275.
- Leslie, L. M. 2017. A status-based multilevel model of ethnic diversity and work unit performance. *Journal of Management*, 43: 426–454.
- Littlepage, G. E., & Mueller, A. L. 1997. Recognition of expertise in groups: Expert characteristics and behavior. *Group Dynamics*, 1: 324–328.
- Littlepage, G. E., Schmidt, G. W., Whisler, E. W., & Frost, A. G. 1995. An input-process-output analysis of influence and performance in problem-solving groups. *Journal of Personality and Social Psychology*, 69: 877–889.
- Liuzza, M. T., Cazzato, V., Vecchione, M., Crostella, F., Caprara, G. V., & Aglioti, S. M. 2011. Follow my eyes: The gaze of politicians reflexively captures the gaze of ingroup voters. *PLoS One*, 6: e25117.
- Manusov, V., & Patterson, M. L. 2006. *The SAGE handbook of nonverbal communication*. Thousand Oaks, CA: SAGE Publications.
- Matsumoto, D., Frank, M., & Hwang, H. 2013. *Nonverbal communication: Science and applications*. Thousand Oaks, CA: SAGE Publications.
- Mayo, M., van Knippenberg, D., Guillén, L., & Firfiray, S. 2016. Team diversity and categorization salience: Capturing diversity-blind, intergroup-biased, and multicultural perceptions. *Organizational Research Methods*, 19: 433–474.
- Medvec, V. H., Madey, S., & Gilovich, T. 1995. When less is more: Counterfactual thinking among Olympic medalists. *Journal of Personality and Social Psychology*, 69: 603–610.
- Milliken, F. J., & Martins, L. L. 1996. Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21: 402–433.
- Nishii, L., & Mayer, D. 2009. Do inclusive leaders help to reduce turnover in diverse groups? The moderating role of leader-member exchange in the diversity to turnover relationship. *The Journal of Applied Psychology*, 94: 1412–1426.
- Nederveen Pieterse, A., van Knippenberg, D., & van Dierendonck, D. 2013. Cultural diversity and team performance: The role of team member goal orientation. *Academy of Management Journal*, 56: 782–804.
- Ocasio, W. 2011. Attention to attention. *Organization Science*, 22: 1286–1296.
- Oedzes, J. J., Van der Vegt, G. S., Rink, F. A., & Walter, F. 2018. On the origins of informal hierarchy: The interactive role of formal leadership and task complexity. *Journal of Organizational Behavior*, 40: 311–324.
- Ohlsen, G., van Zoest, W., & Van Vugt, M. 2013. Gender and facial dominance in gaze cuing: Emotional context matters in the eyes that we follow. *PLoS One*, 8: e59471.
- Pashler, H. E. 1998. *The psychology of attention*. Cambridge, MA: MIT Press.
- Peterson, R. S. 2001. PB Technologies. Kellogg Dispute Resolution Center Teaching Activity.
- Phillips, K., Rothbard, N., & Dumas, T. 2009. To disclose or not to disclose? Status distance and self-disclosure in diverse environments. *Academy of Management Review*, 34: 710–732.
- Purvis, J. A., Dabbs, J. M., & Hopper, C. H. 1984. The “opener”: Skilled user of facial expression and speech pattern. *Personality and Social Psychology Bulletin*, 10: 61–66.
- Remland, M. 1981. Developing leadership skills in nonverbal communication: A situational perspective. *Journal of Business Communication*, 18: 17–29.
- Resick, C. J., Murase, T., Randall, K. R., & DeChurch, L. A. 2014. Information elaboration and team performance: Examining the psychological origins and environmental contingencies. *Organizational Behavior and Human Decision Processes*, 124: 165–176.
- Rhoades, L., & Eisenberger, R. 2002. Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87: 698–714.
- Ridgeway, C. 1982. Status in groups: The importance of motivation. *American Sociological Review*, 47: 76–88.
- Ridgeway, C. 1987. Nonverbal behavior, dominance, and the basis of status in task groups. *American Sociological Review*, 52: 683–694.
- Ridgeway, C. 1991. The social construction of status value: Gender and other nominal characteristics. *Social Forces*, 70: 367–386.
- Ridgeway, C., & Berger, J. 1986. Expectations, legitimation, and dominance behavior in task groups. *American Sociological Review*, 51: 603–617.

- Ridgeway, C., & Correll, S. 2006. Consensus and the creation of status beliefs. *Social Forces*, 85: 431–454.
- Ridgeway, C., & Walker, H. 1995. Status structures. In K. Cook, G. Fine, & J. House (Eds.), *Sociological perspectives on social psychology*: 281–310. New York, NY: Allyn and Bacon.
- Sauer, S. J. 2011. Taking the reins: The effects of new leader status and leadership style on team performance. *Journal of Applied Psychology*, 96: 574–587.
- Schwartz, H. S. 1987. On the psychodynamics of organizational disaster: The case of the space shuttle Challenger. *Columbia Journal of World Business*, 22: 59–67.
- Shellenbarger, S. 2013, May 29. Is the boss looking at you? You'd better hope so. *The Wall Street Journal*. Retrieved from <https://blogs.wsj.com/atwork/2013/05/29/is-the-boss-looking-at-you-you-d-better-hope-so/>.
- Shepherd, V. 2010. Following gaze: Gaze-following behavior as a window into social cognition. *Frontiers in Integrative Neuroscience*, 4: 1–13.
- Sooriya, P. 2017. *Nonverbal communication*. Solapur, India: Laxmi Book Publication.
- Staats, S., Ross, T., Irmischer, K., & Rada, K. 2002. Feeling stares: Places, persons, and pets. *Journal of Applied Social Psychology*, 32: 758–766.
- Stasser, G., & Stewart, D. 1992. Discovery of hidden profiles by decision-making groups: Solving a problem versus making a judgment. *Journal of Personality and Social Psychology*, 63: 426–434.
- 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.
- Stroebe, K., Nijstad, B. A., & Hemelrijk, C. K. 2017. Female dominance in human groups: Effects of sex ratio and conflict level. *Social Psychological & Personality Science*, 8: 209–218.
- Tost, L. P., Gino, F., & Larrick, R. 2013. When power makes others speechless: The negative impact of leader power on team performance. *Academy of Management Journal*, 56: 1465–1486.
- Trawalter, S., Todd, A., Baird, A., & Richeson, J. 2008. Attending to threat: Race-based patterns of selective attention. *Journal of Experimental Social Psychology*, 44: 1322–1327.
- van Dick, R., van Knippenberg, D., Hägele, S., Guillaume, Y. R. F., & Brodbeck, F. C. 2008. Group diversity and group identification: The moderating role of diversity beliefs. *Human Relations*, 61: 1463–1492.
- van Ginkel, W. P., & van Knippenberg, D. 2008. Group information elaboration and group decision making: The role of shared task representations. *Organizational Behavior and Human Decision Processes*, 105: 82–97.
- van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. 2004. Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology*, 89: 1008–1022.
- van Knippenberg, D., & Schippers, M. 2007. Work group diversity. *Annual Review of Psychology*, 58: 515–541.
- van Veelen, R., & Ufkes, E. 2019. Teaming up or down? A multisource study on the role of team identification and learning in the team diversity–performance link. *Group & Organization Management*, 44: 38–71.
- Van Vugt, M., Hogan, R., & Kaiser, R. B. 2008. Leadership, followership, and evolution: Some lessons from the past. *American Psychologist*, 63: 182–196.
- Weber, J. M., & Murnighan, J. K. 2008. Suckers or saviors? Consistent contributors in social dilemmas. *Journal of Personality and Social Psychology*, 95: 1340–1353.
- Wesselmann, E. D., Cardoso, F. D., Slater, S., & Williams, K. D. 2012. To be looked at as though air: Civil attention matters. *Psychological Science*, 23: 166–168.
- Wirth, J. H., Sacco, D. F., Hugenberg, K., & Williams, K. D. 2010. Eye gaze as relational evaluation: Averted eye gaze leads to feelings of ostracism and relational devaluation. *Personality and Social Psychology Bulletin*, 36: 869–882.
- Young, S. G., Slepian, M. L., Wilson, J. P., & Hugenberg, K. 2014. Averted eye-gaze disrupts configural face encoding. *Journal of Experimental Social Psychology*, 53: 94–99.
- Zaccaro, S. J., Rittman, A. L., & Marks, M. A. 2001. Team leadership. *Leadership Quarterly*, 12: 451–483.
- Ziv, G. 2016. Gaze behavior and visual attention: A review of eye tracking studies in aviation. *International Journal of Aviation Psychology*, 26: 75–104.
- Zou, L. X., & Cheryan, S. 2017. Two axes of subordination: A new model of racial position. *Journal of Personality and Social Psychology*, 112: 696–717.
- Zuberbühler, K. 2008. Gaze following. *Current Biology*, 18: 453–455.



**So-Hyeon Shim** (sshim19@hku.hk) is an assistant professor of management and strategy in HKU Business School at the University of Hong Kong. She received her PhD from the Kellogg School of Management, Northwestern University. Her research interests include leadership, status hierarchy and group dynamics, and creativity.

**Robert W. Livingston** (Robert\_livingston@hks.harvard.edu) is a lecturer in public policy at Harvard's Kennedy School of Government. He holds a PhD from Ohio State University. Dr. Livingston's research focuses on diversity, leadership, and social justice. He is also a practitioner who delivers diversity training, executive educational sessions, and management consultancy to numerous Fortune 500 companies.

**Katherine W. Phillips** was an American business theorist and the Reuben Mark professor of organizational character at Columbia University's Business School. She led the Sanford C. Bernstein & Co. Center for Leadership and Ethics at Columbia and served as senior vice dean. She

earned her PhD from Stanford and was known for her research surrounding diversity in the workplace, demonstrating that diversity in teams facilitates greater innovation and creativity.

**Simon S. K. Lam** (simonlam@hku.hk) is the Ian Davies professor in ethics and a professor of management and strategy in HKU Business School at the University of Hong Kong. His research interests include entrepreneurship, leadership, and cross-cultural management.





Copyright of Academy of Management Journal is the property of Academy of Management and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.