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Status Acuity: The Ability to Accurately Perceive Status Hierarchies Reduces Status Conflict and Benefits Group Performance

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Humans are a fundamentally social species, having evolved in groups with status hierarchies. However, research on the dimensions of individual ability has largely overlooked the domain of status. Building upon research on the individual-level benefits of accurate status perceptions, we propose that there exists an individual dispositional ability to perceive groups' informal status hierarchies, which we call *status acuity*, and which has important implications for group dynamics. We find support for the existence and importance of status acuity across several studies. In Studies 1a and 1b, we develop and validate a measure of status acuity, find that it is distinct from previously studied individual abilities including emotional intelligence, cognitive intelligence, and accurate learning of social networks, and find that it predicts important individual outcomes at work. In Studies 2 and 3, we examine the effects of status acuity in face-to-face groups. As predicted, groups whose members have higher status acuity experience less status conflict, which benefits performance on creative idea-generation as well as problem-solving tasks. This work extends existing research on status and group dynamics, and contributes to our understanding of the constellation of human abilities, offering a new answer to the question: "How well does this person work in groups?"

Keywords: status, hierarchy, groups, teams, conflict

Supplemental materials: https://doi.org/10.1037/apl0001024.supp

Informal status hierarchies are ubiquitous in groups, serving to organize group activity, and having a major impact on individual and group outcomes (Anderson et al., 2001; Bendersky & Pai, 2018; Magee & Galinsky, 2008). Traditional theories of status have tended to assume that status hierarchies are visible and agreed upon by all group members (Berger et al., 1972; Ridgeway & Berger, 1986). However, recent work has found substantial variation across individuals' perceptual accuracy of their groups' status hierarchies (Anderson et al., 2006, 2008; Yu & Kilduff, 2020), and that individuals with a more accurate sense of the overall status hierarchy (who stands where) within their groups achieved greater individual performance (Yu & Kilduff, 2020).

The current research extends our understanding of the nature and consequences of status accuracy in two main ways. First, we propose that certain individuals will be reliably more accurate in their assessments of status, such that accurately perceiving status hierarchies in groups represents an ability factor which we call *status acuity*. Yu and Kilduff (2020) found variation across individuals in their accuracy in perceiving the status hierarchies of their primary work groups, but status accuracy within a single group could be due to random variation or external factors such as being paired with a mentor who themselves had accurate status perceptions. Second, we test the consequences of individuals' status accuracy for group-level outcomes.

We begin by developing a measure of status acuity which assesses the accuracy with which individuals, as outside observers, can perceive the status hierarchies of groups by watching them interact (Studies 1a and 1b). As expected, we find that some individuals are reliably higher in status acuity than others. Next, we demonstrate the discriminant validity of status acuity from a wide range of established individual ability measures, and its predictive validity for key individual outcomes (job performance, acceptance by coworkers) suggested by prior work (Study 1b). Lastly, we explore the effects of status acuity on group dynamics (Studies 2 and 3). Using compositional models, we find that groups with higher average and minimum levels of status acuity experience less status conflict, which is in turn associated with better group performance.

We believe this work makes several important theoretical contributions. First, we contribute to research on status accuracy and intra-group status dynamics. We extend existing work on status accuracy by (a) conceptualizing status acuity as an ability factor, (b) providing a reliable, validated, and easily administered measure of this ability, and (c) exploring its group-level consequences. More

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Analysis code, data, and research materials are available from Siyu Yu upon request.

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broadly, we extend research on functional versus dysfunctional status dynamics in teams. Substantial research has revealed that functional status dynamics are vital for team performance, and that teams who engage in disagreement or conflict over status suffer from poor performance (Anderson & Willer, 2014; Bendersky & Hays, 2012; Greer et al., 2018; Halevy et al., 2012). However, less is known about what drives functional versus dysfunctional status dynamics (with some important exceptions, e.g., Antino et al., 2019; Lee et al., 2018), and in particular, which individual-level characteristics help versus harm team status dynamics. We show that status acuity is such an individual characteristic indeed, given the dysfunctional nature of status disagreement and conflict in teams (Bendersky & Hays, 2012), it stands to reason that teams consisting of individuals with greater ability to accurately perceive status will have more functional status dynamics. Thus, we extend research focused on the consequences of the shape or structure of group hierarchy (e.g., Halevy et al, 2012; Yu et al., 2019), conflict over relative status (e.g., Bendersky & Hays, 2012; Lee et al., 2018), and the general functionality of status hierarchy (Anderson & Willer, 2014).

Second, we contribute to a small but growing body of work on the role of individuals' social perceptual skills in driving group performance and "collective intelligence," or the extent to which teams can perform well across a variety of tasks (e.g., Woolley et al., 2010; Riedl et al., 2021). In summarizing this research, Woolley et al. (2015) note that "what is needed for a group to be collectively intelligent is a number of people who are high in social perceptiveness" (421). Thus far, researchers have focused on social perceptiveness in the form of emotional intelligence and "theory of mind," or individuals' ability to perceive other individuals' mental states from their facial expressions (Day & Carroll, 2004; Engel et al., 2014; Riedl et al., 2021; Woolley et al., 2010). We extend this work by investigating a novel social perceptual ability that relates to group status dynamics, thus expanding our understanding of what "social perceptiveness" entails.

Third, we strive to make broad contributions to understanding of human ability. Although humans are a fundamentally group-based species, existing dimensions of human intelligence and ability have not examined group interaction as the target of individuals' abilities. Cognitive intelligence encompasses individuals' facility with abstract and inanimate concepts such as logic, words, and numbers (Brody, 2004; Hunt, 2010). Emotional intelligence, although sometimes treated as a "catch-all" for any social aspects of intelligence, in actuality focuses on the emotions expressed by the self or a single target individual (Mayer & Salovey, 1997). Thus, existing ability constructs do not capture individuals' facility at navigating interactive group settings, which is a significant shortcoming in our understanding of the constellation of human abilities. Given that status hierarchies are the primary organizing structure of groups and critical to group functioning, we start to address this gap by examining individuals' ability to accurately perceive status hierarchies. We are hopeful that adding status acuity to factors such as cognitive and emotional intelligence will provide a more complete picture of human ability.

Status Hierarchies and Status Accuracy

Most human groups are organized into status hierarchies, which have a significant impact on group processes and performance (Halevy et al., 2012; Simpson et al., 2012). Although hierarchies can be based on formal rank and power (Magee & Galinsky, 2008), we focus on informal status hierarchies, which entail variation across group members in the respect, admiration, and informal influence that they possess (Anderson et al., 2001; Henrich & Gil-White, 2001).[1] Traditionally, prevailing theories of status assume status consensus: that individuals within a group all perceive the same ordering of relative status. This includes status characteristics theory (SCT; Berger et al., 1972, 1980; Ridgeway, 1987; Ridgeway & Berger, 1986), which posits that status hierarchies are formed as individuals in a group assess the extent to which they each possess characteristics valued by the group and allocate status accordingly. SCT "presume(s) that these beliefs are held in common by a given set of interactants" (Ridgeway & Berger, 1986; p. 607).

However, recent work explicitly tested this assumption and found meaningful variance in the accuracy of individuals' status perceptions, both for their own status (Anderson et al., 2006, 2008) and their groups' overall status hierarchies (Yu & Kilduff, 2020). Furthermore, status accuracy appears to matter for individuals; accuracy within a particular group was positively related to performance in that group, mediated by greater connection to high-status others (Yu & Kilduff, 2020).

Status Acuity as an Individual Ability Factor

We extend this work by proposing and testing the idea that there exists a general *ability* to detect informal status differences in groups, which varies reliably across individuals and is not captured by existing dimensions. As per SCT, assessing the relative status of others involves assessing the extent to which they possess valued characteristics, many of which—intelligence, motivation to help the group, and task expertise, for example—are not immediately and outwardly visible (Anderson & Kilduff, 2009a, 2009b). In this way, human status hierarchies differ from those of non-human species, which are primarily based in physical size and aggressiveness (Koski et al., 2015). Furthermore, informal status in groups also manifests in a continuous stream of subtle interpersonal cues, such as speaking time and volume, attention or lack thereof from others, and cues of support, deference, and interruption (Cheng et al., 2016; Hall & Coyne, 2014; Ridgeway & Berger, 1986; see Hall et al., 2005 for a review). Thus, being able to reliably perceive status dynamics across groups should require social perceptual ability, to notice and accurately interpret these subtle and ambiguous cues. We call this ability as status acuity. Given existing knowledge on the determinants of status, status acuity likely entails the accurate perception of (a) individual cues of group members' levels of valued characteristics such as competence and motivation, and (b) interactional cues between group members, such as attention paid, deference, and interruptions.

The notion that status acuity might represent a core individual ability aligns with the evolutionary importance of groups and status hierarchies (e.g., Dunbar & Shultz, 2007). Theorists argue that natural selection should have favored those who used status as a cue in deciding whom to observe and imitate, because this ability would

[1] In addition, our focus is primarily on prestige-based status hierarchies (Cheng et al., 2013; Henrich & Gil-White, 2001), in which status in groups is conferred based on individuals' perceived value provided to the group, in contrast to dominance-based status hierarchies, in which individuals achieve higher positions through intimidation and coercion (Cheng et al., 2010, 2013).

facilitate learning best practices for survival (Henrich & Gil-White, 2001). Indeed, other work shows that people, on average, make better than chance judgments of relative status in dyads (Mast & Hall, 2004) and of levels of dominance hierarchy in groups (i.e., variance in the dominance displayed across a set of faces in a single photo; Phillips et al., 2018), and are better at learning and recalling hierarchy-related stimuli than analogous nonhierarchical stimuli (van Kreveld & Zajonc, 1966; Zitek & Phillips, 2020; Zitek & Tiedens, 2012).[2] Furthermore, recent work in neuroscience has revealed specific patterns of brain activity associated with status perceptions (Chiao, 2010; Chiao et al., 2008; Koski et al., 2015; Marsh et al., 2009), suggesting we may have a special set of mental capabilities related to status hierarchies.

Existing Constructs Potentially Related to Status Acuity

Given the inherently interactive and group-based nature of status dynamics, we believe that status acuity represents a novel dimension of human ability that is distinct from existing constructs and ability factors. First, status acuity is conceptually distinct from accurate recognition of emotions (Mayer & Salovey, 1997) and "theory of mind," or the ability to infer what another person is thinking (Baron-Cohen et al., 2001; Woolley et al., 2010, 2015). These both involve assessing the emotions or mental states of a single person, whereas assessments of status require *relative* assessments across multiple interacting individuals. Furthermore, emotions are expressed rapidly, and emotion recognition and theory of mind are assessed via snapshots of individuals' expressions (e.g., "reading the mind in the eyes" test (RME); Baron-Cohen et al., 2001; "diagnostic analysis of nonverbal accuracy" test (DANVA; Nowicki & Duke, 1994; Nowicki & Nowicki, 2006),[3] whereas assessments of status involve observing cues that take place over the course of group interaction, such as who pays attention to whom, and how individuals' nonverbal expressions vary as they speak to different members within the group (Cheng et al., 2016; Hall et al., 2005; Magee, 2009).

Second, status acuity is also distinct from cognitive intelligence, which encompasses fluid intelligence, or abstract reasoning, and crystallized intelligence, or individual differences in acquired knowledge (Brody, 2004; Cattell, 1943; Hunt, 2010). In contrast to the inherently social nature of status acuity, measures of cognitive intelligence assess individuals' ability to learn, remember, reason, and solve problems related to nonsocial, static entities such as words, numbers, and shapes (Brody, 2004; Hunt, 2010).

Lastly, status acuity is conceptually distinct from the ability to accurately perceive social networks, or the existence of dyadic interaction ties between group members (e.g., whether two people are friends; Brands, 2013; Casciaro, 1998; Krackhardt, 1990). Network perceptions capture one-on-one relationships and interactions, whereas status perceptions are based on relative assessments of multiple individuals' characteristics as well as observation of group interactions (see Yu & Kilduff, 2020, for more on this distinction between status accuracy and cognitive network accuracy; empirically, they observed modest positive correlations between these two, ranging from .13 to .36). We measure all these constructs in our validation studies, to empirically examine their degree of overlap.[4]

Group Status Acuity Composition and Effects on Performance-Harming Intra-Group Status Conflict

In addition to testing whether status acuity reflects a dispositional ability and validating a measure of it, we investigate whether and how individual group members' status acuity levels can affect group-level outcomes. Existing research on collective intelligence has shown that individual members' ability to infer the emotions and mental states of other individuals (theory of mind) is a key individual-level driver of group performance, such that groups with higher average scores on this dimension across their members perform better on a wide range of tasks (Engel et al., 2014; Woolley et al., 2010). We extend this work by exploring how individuals' ability to accurately perceive status hierarchies affects groups' levels of status conflict, which then affects their task performance. Status conflict entails conflict between group members about their relative positions in the group's status hierarchy and captures the sum of behaviors including assertions of dominance, disagreements about members' relative contributions, and competitions for influence (Bendersky & Hays, 2012). Importantly, status conflict harms group performance. Bendersky and Hays (2012) find that groups with higher levels of status conflict restrict information sharing and communication, thereby impairing group performance. Further, Lee, Choi, and Kim (2018) found that status conflict results in lowered levels of psychological safety, thus reducing groups' creative output.

Effects of Group Members' Average Status Acuity on Group Status Conflict

We propose that groups whose members have higher status acuity will experience reduced status conflict, leading to increased group performance. Although status acuity is an individual-level variable, individual members' characteristics can be aggregated to the group level to reflect a configural property that affects group-level processes and outcomes, regardless of agreement or consistency among members (Bell et al., 2018; Crawford & Lepine, 2013; Kozlowski & Klein, 2000). As we discuss below, we consider multiple compositional models, or ways in which individual members' levels of status acuity aggregate in groups to affect group-level status conflict. However, we chose to focus primarily on average levels of status acuity in groups, thus using the additive aggregation model (Chan, 1998; Halfhill et al., 2009; Kozlowski & Klein, 2000), for the following reasons.

First, the additive model is one of the most common and validated "variable-centered" approaches (Emich et al., 2021) for studying the group-level effects of individual characteristics (Bell, 2007; LePine et al., 2011; Prewett et al., 2009), including cognitive ability (Bell, 2007; Ellis et al., 2003; LePine, 2003; Woolley et al., 2010),

[2] Importantly, this work has only shown better than chance accuracy across individuals on average, and has not examined variance in accuracy across individuals or its consequences.

[3] This is also true of prior work on recognizing the emotions of groups using the emotional aperture measure (Sanchez-Burks & Huy, 2009), which asks participants to detect the proportion of people in a group who are expressing positive versus negative emotion, from a briefly displayed still picture.

[4] We also note the existence of scattered instances of the terms "social intelligence" (e.g., Freeman et al., 1987; Freeman & Romney, 1987; Sternberg & Smith, 1985) and "interpersonal intelligence" (e.g., Gardner & Hatch, 1989). To our knowledge, there exists no consensual definition for these constructs nor any rigorous research program that has studied them.

emotional intelligence or social sensitivity (Druskat & Wolff, 2001; Jordan & Troth, 2009; Woolley et al., 2010), personality traits (Chiu et al., 2016; Courtright et al., 2017; LePine, 2003; Xu et al., 2019), psychopathy, dark triad, implicit aggression (Baysinger et al., 2014; Dierdorff & Fisher, 2021; Grijalva et al., 2020), decision style (Zhu et al., 2020), and value orientation (Cheng et al., 2012). Like this existing work, we focus on groups working on interdependent tasks, where productivity should be positively related to the summed abilities of members (Tziner & Eden, 1985) such that "more is better" (Mathieu et al., 2013), making additive aggregation most appropriate (Barrick et al., 1998; Homan et al., 2008; LePine et al., 2011). Second, status conflict has an interdependent and additive nature: It reflects the sum of a set of behaviors such as assertions of dominance and relative value (Bendersky & Hays, 2012). By aggregating status acuity in an additive fashion, we match our independent variable to our proposed group-level mediator.

We predict that the average level of status acuity across group members will be negatively associated with group-level status conflict, for the following reasons. First, higher average status acuity should help groups to avoid status conflict during initial hierarchy formation. Status hierarchies form in large part through group members assessing one another in terms of the value that they can provide to the group (Berger et al., 1972, 1980; Ridgeway, 1991; Ridgeway & Berger, 1986). Individuals high in status acuity will make more accurate assessments; in particular, they should be better at perceiving "deep-level" status characteristics such as task-relevant expertise (Bunderson, 2003), intelligence (Wiley & Eskilson, 1985), and motivation (e.g., a desire to help the group succeed; Willer, 2009). These factors are often revealed only through subtle signals, yet they are critical to determining the true value that individuals can contribute to a group, as opposed to more easily visible and "diffuse" status characteristics such as race or gender.

By more accurately perceiving the value that other members can provide to the group, higher status acuity individuals should help groups experience less conflict over relative status. Research suggests that individuals desire status levels commensurate with the value they provide (Anderson et al., 2012), and this desire will be more likely to be met in groups containing more high-status-acuity individuals. For example, imagine a newly formed group of four members (A, B, C, and D) in which A is highly motivated and able to help the group. If A's groupmates are high in status acuity, they will recognize A's value and confer status to her. However, if they are low in status acuity, they may not listen to A when she is attempting to contribute, or at least fail to fully leverage the value she can provide (e.g., by not asking for her opinions or giving her important responsibilities). This will likely lead A to attempt to assert her value (Anderson et al., 2012), resulting in status conflict.

Second, having more high-status-acuity members should help groups avoid status conflict during periods of hierarchy adjustment. Task groups often encounter new task demands as they work, which may change the relative value that group members provide to the group, warranting at least temporary changes to the status hierarchy. Indeed, status hierarchies in groups, although moderately stable (e.g., Kilduff & Galinsky, 2013), are continually being maintained versus negotiated throughout group interaction (Chizhik et al., 2003; Hays & Bendersky, 2015; Scheepers & Ellemers, 2005).

Groups with more members higher in status acuity should be better able to navigate the challenge of shifting their status hierarchies as task demands shift. Higher status acuity will enable individuals to more accurately perceive shifts in others' value as reflected through changes in patterns of individual and interactional status cues, and these perceptions will inform decisions about when to speak up versus listen and when to impose one's will versus defer, which will help determine whether status conflict occurs. For example, imagine that in a group of four members (A, B, C, and D), Member A is making a suggestion related to a new challenge the group faces. If member B has high status acuity, he may notice that A is speaking with greater than usual confidence and conviction, that this issue relates to A's past experiences, and that C and D are listening intently. Therefore, he will perceive that A has high value and status in this moment, and be more likely to defer to A, letting her express her idea and giving it careful consideration. By contrast, if B has low status acuity, he may fail to notice these cues and instead challenge member A's idea, interrupt her, or look to a different member to address the challenge. This will likely result in status conflict: A may then reassert herself, and/or C and D may step in to try to correct or override A. The more low-status-acuity members a group has, the more likely these instances of conflict, harming group performance. Indeed, related research finds that among groups facing shifting task demands, those that are more "nimble" in realigning their status hierarchies experience greater group performance (Aime et al., 2014).[5]

In summary, we hypothesize the following:

Hypothesis 1: The average level of members' status acuity in a group is negatively related to intra-group status conflict.

Hypothesis 2: The average level of members' status acuity in a group has an indirect positive effect on group performance through reduced intra-group status conflict.

Low Status Acuity as a "Bad Apple" Effect

In addition to examining the effects of the average level of group members' status acuity, we also explore the possibility that having just one group member especially low in status acuity could be enough to cause status conflict. Groups researchers have explored the phenomenon of "bad apples,"—the idea that having one group member who is particularly low on a valued characteristic or high on a problematic characteristic or behavioral tendency—can have undue harmful influence on groups (Duffy & Lee, 2012; Felps et al., 2006; Leggat et al., 2019; van de Vliert et al., 1995). Barrick et al. (1998), in their investigation into how group members' personality traits affect group outcomes, argue that "A single disagreeable member ... may be enough to destroy the team's

[5] We should acknowledge that our arguments for why status acuity will predict status conflict focus primarily on perceptual shortcomings and disagreements, consistent with our conceptualization of status acuity as reflecting variance in the ability to perceive relative status differences accurately. Although the antecedents of status conflict are still being explored, existing work also portrays it as potentially resulting from multiple group members desiring high status (Bendersky & Hays, 2012); that is, status motivation may also drive status conflict. We see status acuity as a conceptually distinct driver of status conflict that operates independently of status motivation, thus contributing to an understanding of the antecedents of status conflict. Indeed, some pilot data reported in our online Supplemental Materials show a nonsignificant correlation ($r = -.12$, *n.s.*) between individuals' status acuity and their desire for status; p. 6 of the SOM.

capability to work cooperatively, regardless of the level of agreeableness for other team members" (381).

We think this could be the case for status acuity. Having one group member who is more oblivious to cues of value and status could be enough to create repeated instances of status conflict. This person might ignore, distract attention from, or interrupt other members at the "wrong" times (i.e., when they have something important to contribute), as well as look to the wrong individuals for suggestions and leadership. In turn, these behaviors may draw others into status conflict, even if they are high in status acuity, because they must try to reassert their value and/or step in and try to override this low-status-acuity individual. Indeed, prior work suggests lone individuals can instigate group conflict (Zhao et al., 2019) and that conflict can spread within groups via "conflict contagion" (Jehn et al., 2013).

Thus, in addition to using an additive compositional model to explore the effects of average status acuity in groups, we also test a minimum compositional model (i.e., use the status acuity score of the least-acute member of the group as a group-level independent variable). This model tests whether groups with one individual especially low in status acuity suffer from more status conflict, leading to worse performance, as compared to groups whose least-acute member has more moderate status acuity. Operationalizing individual inputs as the team minimum is another established way of transforming individual-level inputs into group-level processes and outcomes (e.g., Barrick et al., 1998) and is theoretically justified when "the characteristic of one team member will have a profound influence on team performance" (Bell, 2007, p. 599; see also Kozlowski & Klein, 2000). We thus propose two additional exploratory hypotheses:

> *Hypothesis 3:* The minimum level of status acuity across a group's members is negatively related to intra-group status conflict, such that the higher the minimum individual score, the less status conflict in the group.
>
> *Hypothesis 4:* The minimum level of status acuity across a group's members has an indirect positive effect on group performance through reduced intra-group status conflict.

By contrast, we do not see any clear reasons for why the maximum or variance in status acuity scores within a group would have special influence on group processes. Having one very acute member may not be enough to substantially reduce a group's level of status conflict, as this individual may still have to engage his or her less acute groupmates. Further, it is not clear how low versus high variance in status acuity across group members would affect status conflict. A group of all medium-status-acuity individuals (low variance) could still experience status conflict because each member could misperceive the group's status hierarchy in different ways.

Overview of Studies

We conducted four studies with a multimethod approach to explore the construct of status acuity and its group-level consequences. In Studies 1a and 1b, we develop and validate a computer-based test of status acuity that requires individuals to watch a series of groups interacting and to indicate their perceptions of those groups' status hierarchies. We find that status acuity is distinct from previously studied human abilities, has high test–retest reliability, and predicts individuals' reported performance and social acceptance at work. In Studies 2 and 3, we examine the group-level consequences of status acuity among face-to-face groups, and find that groups with higher average, and minimum, status acuity scores experience lower status conflict, which predicts higher group performance.

Transparency and Openness

We describe our sampling plan, all data exclusions (if any), and all measures in Studies 1–3 in the main text, Appendix, and online Supplemental Materials (SOM). We adhered to the *Journal of Applied Psychology* methodological checklist. Analysis code, data, and research materials are available from Siyu Yu upon request. Data were analyzed using STATA (Version 15; StataCorp, 2017), R (Version 4.1.1; R Core Team, 2020), TripleR package (Version 1.5.3; Schönbrodt et al., 2012), and Lavaan package (Version 0.6-1; Rosseel, 2012). As recommended by Bliese and Wang (Bliese & Wang, 2020), we reported observed post hoc power (denoted as 1–β) at 95% significance level for regression analyses. All tests were two sided. The study design, hypotheses, and data analysis plan were not preregistered. Human subjects review and approval for studies were granted by the institutional review boards of New York University (Protocol number: institutional review board [IRB]-FY2016-1010, Title: Hierarchical Intelligence).

Study 1a: Development of the Status Acuity Assessment

Study 1a describes the initial development and validation of our status acuity assessment, in two stages. In Stage I, we created a content-valid assessment using videotaped group interactions, and in Stage II, we conducted an exploratory factor analysis (EFA) to examine the unidimensionality of our status acuity measure.

Stage I: Development of the Status Acuity Assessment

We created a measure of individuals' ability to accurately perceive informal status hierarchies within groups that involved having participants watch videoclips of groups interacting and then indicate their perceptions of the groups' status hierarchies. The videoclips were drawn from longer videos (Anderson & Kilduff, 2009b) in which groups of four undergraduates worked together for 45 min to generate a proposal for a new web-based company. These groups were either all male or all female, to allow hierarchies to emerge from deeper status characteristics such as task ability and motivation, rather than gender which is a diffuse status cue (Anderson & Kilduff, 2009b; Ridgeway, 1991). We selected nine of the groups from the original study, based on availability and quality of the video (36 total individuals; four individuals per group; 33.33% female; M_{age} = 20.5 years, SD = 1.50; 2.78% identified as Black, 44.44% as Caucasian, 44.44% as Asian, 5.56% as Hispanic, and 2.78% as "other"[6]).

The status hierarchies of these groups were assessed in the original study via a posttask survey in which participants ranked

[6] There were no significant ethnicity-based differences in group members' status attainment.

each other on "status (i.e., respect and admiration from other group members)" and "overall influence (how much they influenced the group's decision and processes)" (1 = *highest rank*, 4 = *lowest rank*), (reversely coded in subsequent calculations) and rated each other on "achieved high status (i.e., earned respect and admiration of the other group members)" and "had a lot of influence in the group" (1 = *does not describe this person at all*, 7 = *describes this person very well*). For each of these, we assessed consensus among the original group members by estimating target variance in the social relations model (variance due to consensus; The Social Relations Model [SRM]; Kenny, 1995). These ratings revealed significant target variance (4-point ranking on status: *target variance estimate* = 1.04, $t = 3.55$, $p = .001$; 4-point ranking on influence: *target variance estimate* = 1.03, $t = 3.62$, $p = .001$; 7-point rating on status: *target variance estimate* = 1.58, $t = 3.67$, $p = .001$; 7-point rating on influence: *target variance estimate* = 1.76, $t = 3.57$, $p = .001$), indicating significant agreement on the status hierarchies within these groups. Thus, these status scores were meaningful and reliable, which are requirements for something to be used as a truth criterion (Hall et al., 2016). We calculated target scores of all four measures with SRM, and averaged them into an aggregate measure of status ($\alpha = .94$) as each group member's reference *target status score*. The ordering of members on reference target status scores represented the truth criterion of each group's status hierarchy.[7]

We employed a multistep procedure to arrive at a set of videoclips for the status acuity assessment. First, a research assistant extracted a series of shorter clips from the original 45-min videos in which group members were involved in the discussion. Our goals were to (a) create short clips that made watching several clips possible for participants, which was required to create a reliable measure of status acuity, and (b) ensure the clips involved group discussion, to provide a range of cues that could be used to discern the groups' status hierarchies. In total, we identified 79 clips involving an active group discussion that began and was "resolved" within a reasonable timeframe, ranging from 37 to 170 s in length. Although these may seem like short interactions for assessments of status, each clip still contained a wealth of potential status cues, and existing work suggests people can and do make assessments of various factors (e.g., personality, competence) based on even shorter video clips and still photos (Mast & Hall, 2004; Rule et al., 2008). Research on thin slices of nonverbal behavior has also found that watching short video clips leads to similar impressions as the whole interaction (Murphy et al., 2019).

Second, we determined the validity, or representativeness, of each clip by how accurately it represented the group's actual status hierarchy (again, as reported by the actual group members immediately after working together). We recruited 208 U.S. adults from Amazon Mechanical Turk (MTurk; Buhrmester et al., 2011) and assigned each of them to watch a random sample of nine of the 79 clips, one from each group. Each clip was watched by an average of 21.8 participants ($min = 15$; $max = 36$). Participants rated how much they thought each group member achieved high "status and influence" in the group on a 7-point scale and ranked the relative status and influence of all four group members. For each participant, his/her perceived status of each group member was the average of standardized status rating and ranking scores that he/she indicated toward each group member. Then, for each group, we identified the single clip that most accurately represented that group's status hierarchy: The clip for which the average perceived hierarchy, across all participants who watched that clip, was closest to the correct answer, using the formula for status acuity that we describe in detail below in Stage II. In using this criterion, we drew upon research on the "wisdom of crowds," which suggests that although individual estimates vary, averaging estimates across larger groups of individuals tends to yield answers very close to the truth (Mannes et al., 2014). Selecting video clips in this manner helped minimize the risk of bias in our clips (clips that misrepresented groups' final status hierarchies); any bias that did exist should work against finding significant correlations between status acuity and behavioral outcomes. Thus, our final measure consisted of nine clips from nine different groups (total video time = 874 s; $M = 97.1$ s, $SD = 25.5$ s; see a sample test interface in the Appendix and a full description on pp. 23–25 of the SOM).

Stage II: Exploratory Factor Analysis

Participants

We then conducted EFAs and reliability tests. Based on prior research on scale validation, which recommends at least 10 participants per scale item (Boateng et al., 2018; Nunnally, 1978) and 200–300 total participants for factor analysis (Comrey, 1988; Guadagnoli & Velicer, 1988), we sought to recruit 250 U.S. adults from MTurk, and a total of 251 participated (38.7% female, $M_{age} = 35.05$, $SD_{age} = 10.01$; 8.8% Black, 79.6% Caucasian, 3.6% East Asian, 0.4% South Asian, 6.0% Hispanic, and 1.6% other race), 242 of which passed an established attention check (Mason & Suri, 2012) and were included in analysis. MTurk data are appropriate to test constructs' psychometric properties and are comparable to other data sources (Buhrmester et al., 2011; Goodman et al., 2013). Participants received $3 for completing the study and were offered performance incentives—those who performed in the top 10% in terms of their average performance across all ability-based measures [i.e., status acuity and RME (see Footnote 7) received a $1 bonus]—to increase their engagement.

Measures

Status Acuity. Participants completed the status acuity measure developed in Stage I. They were provided with definitions of status ("the respect, esteem, and admiration that someone has in the eyes of their fellow group members") and influence ("the extent to which someone can determine others' attitudes and behavior and make decisions for the group") and then watched each of the nine video clips and completed the same status rating and ranking items.

[7] Unlike other ability or intelligence tests in which the "right" answers are often determined by the objective "truth" (e.g., cognitive intelligence, math tests; Sternberg, 1997) or expert consensus (e.g., emotional intelligence; MacCann & Roberts, 2008; Mayer et al., 2000), our chosen truth criterion here is based in the social perception literature in which the truth is determined by the consensual perceptions made by others (Stern et al., 2013). This decision was driven by the prevailing conceptualization of status used in the small-groups literature as the respect, admiration, and influence that an individual is socially conferred by his or her groupmates. Indeed, as stated in Stern et al. (2013), "Group members' perceptions of one another would be used as the measurement of the truth of each group member's status" (p. 307).

To ensure that our status acuity calculation was consistent with existing conceptualizations of status accuracy (Yu & Kilduff, 2020), and perceptual accuracy more broadly (Ambady et al., 2000; Blackman & Funder, 1998; Funder & West, 1993; Levesque & Kenny, 1993; Yu & Kilduff, 2020), we calculated the Pearson's correlation coefficient between each participant's status ratings of each group's members, and those individuals' actual status scores. We then took the average of the nine correlation coefficients for a given participant as that person's status acuity, as in Equation 1:

$$\text{status acuity} = \frac{\Sigma_{i=1}^{9}\text{Corr}\begin{bmatrix} r_{i1} & t_{i1} \\ r_{i2} & t_{i2} \\ r_{i3} & t_{i3} \\ r_{i4} & t_{i4} \end{bmatrix}}{9}, \quad (1)$$

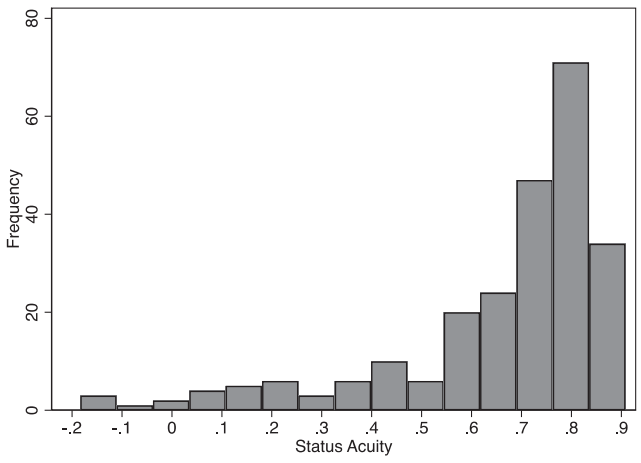
where $r_{i1} - r_{i4}$ are the participants' status ratings of each member of each group i, and $t_{i1} - t_{i4}$ are each group member's reference target status score produced by the social relations model. As a correlation, status acuity can range from −1, indicating maximum inaccuracy from a perceived status ordering that is the opposite of the actual status hierarchy, to one, indicating perfect accuracy.[8] Figure 1 displays the frequency distribution of participants' status acuity. Participants were fairly accurate on average (M = .66), but with substantial individual variation (SD = .22).

Other Measures. Although our primary purpose in this study was to conduct an EFA, we also had participants complete a range of additional measures as a first, exploratory, look at the potential overlap between status acuity and other established ability factors. We report these details in the SOM (pp. 2–5).[9]

Results

EFA results revealed only one factor with an eigenvalue greater than 1 (eigenvalue = 2.87), which explained 64.2% of the variance in status acuity, above the 60% minimum recommended to consider a construct unidimensional (Hinkin, 1998). The factor loadings for the status acuity ranged from .37 to .66, which are above the minimum recommended .30 practical significance level (Hair et al., 1998; Tabachnick & Fidell, 1996) and compare similarly or favorably to prior ability-based measures (e.g., factor loadings of the RME test range from .07 to .56 (Olderbak et al., 2015) and the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) range from .39 to .62 (Palmer et al., 2005)).

Figure 1
Distribution of Status Acuity (Study 1a)



Study 1b: Validity of Status Acuity Assessment

In Study 1b, we collected a second sample to assess the convergent validity, discriminant validity, predictive validity, and test–retest reliability of status acuity. To show convergent validity, status acuity should empirically relate to theoretically relevant constructs (Campbell & Fiske, 1959). Given our conceptualization of status acuity as social perceptual ability, we expected to observe moderate positive correlations with measures of emotion recognition/theory of mind and network perception accuracy, as well as with cognitive intelligence, which is positively related to social perceptual abilities (Bastian et al., 2005; Côté & Miners, 2006). To show discriminant validity, status acuity should be distinct from these theoretically relevant constructs, as revealed through factor analyses. We also expected to see weaker correlations with less theoretically relevant constructs (Hinkin, 1995), such as the Big Five personality, which has been used to show discriminant validity in prior social perceptual ability research (e.g., emotional intelligence; Caruso et al., 2002; MacCann & Roberts, 2008). To show predictive validity (Hinkin, 1998), status acuity should predict theoretically expected outcomes; we examined individuals' self-reported consequences of status acuity within their workgroups, social acceptance, and work performance (Anderson et al., 2006, 2008; Yu & Kilduff, 2020). Finally, we measured the long-term test–retest reliability of the status acuity assessment by having participants complete our status acuity measure at two different times, a year apart.

Method

Participants

We recruited 200 full-time-employed U.S. adults from MTurk (42.5% female; M_{age} = 34.08 years, SD_{age} = 9.53; $M_{\text{work experience}}$ = 13.20 years, $SD_{\text{work experience}}$ = 9.26; 6.0% Black, 78.5% Caucasian, 8.0% East Asian, 1.0% South Asian, 5.0% Hispanic, and 1.5% other race) to complete three approximately 30-min surveys. Survey 1 included assessments of status acuity, emotion recognition (RME), Big Five personality, and outcomes for predictive validity. Four participants failed the attention check, resulting in a sample of 196 participants for Survey 1. Then, approximately 5 months later, participants who had passed the attention check were invited to

[8] We also calculated an alternative measure of individuals' status acuity using the average absolute distance between participants' status ratings of each member and the member's actual status. This measure was highly correlated with the correlation-based measure (r = .95, p < .0001 across all studies) and yielded identical results.

[9] The additional exploratory measures included reading the mind in the eyes (RME), diagnostic analysis of nonverbal accuracy (DANVA), emotional aperture measure (EAM), situational test of emotional understanding (STEU), situational test of emotion management (STEM), profile of nonverbal sensitivity (PONS), Raven's progressive matrices (RPM), Wonderlic personnel test (WPT), DeSoto ability to learn exchange relations task (DeSoto) and personality (e.g., Big Five personality) in several follow-up surveys. On average, status acuity correlates with these individual-ability measures at a moderate level (r = .47).

complete Survey 2, which included assessments of cognitive intelligence [Raven's progressive matrices (RPM) and Wonderlic personnel test (WPT)] and accuracy in perceiving social relations (DeSoto; $N = 149$ completed, 74.5% of the sample). Finally, approximately 1 year after Survey 1, participants were invited to complete Survey 3, which included the same assessments of status acuity, emotional intelligence, cognitive intelligence, and accuracy in perceiving social relations ($N = 101$ completed, 50.5% of the original sample).[10] Importantly, we did not observe evidence of bias with respect to participants who dropped out across the surveys: those who failed to complete Survey 3 had almost identical status acuity ($M = .69$, $SD = .19$) to those who completed all three surveys ($M = .69$, $SD = .18$). Participants received \$3, \$5, and \$8 for completing each of these three surveys, respectively, and they were offered performance incentives to boost engagement: The top 10% of average performance across status acuity and RME on Survey 1 received an extra \$2; the top 50% of average performance across RPM, WPT, and DeSoto on Survey 2 received an extra \$.50; both incentives were applied in Survey 3.

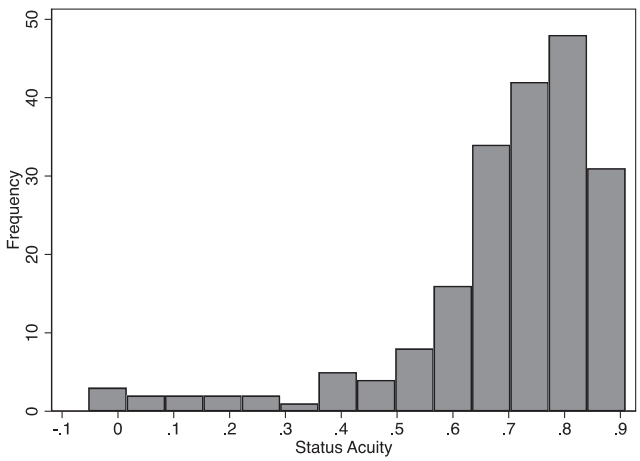
Measures

Status Acuity (Survey 1 and Survey 3). Participants completed the same nine-item status acuity assessment as in Study 1a [$\alpha_{survey\ 1} = .70$; $\alpha_{survey\ 3} = .71$, comparable to other social perceptual ability measures (e.g., MSCEIT's Cronbach's α values range from .34 to .77 (Brannick et al., 2011); RME's Cronbach's α values range from .37 to .61 (Khorashad et al., 2015; Vellante et al., 2013)]. Figure 2 shows the distribution of status acuity; participants were again fairly accurate on average, but with meaningful individual variation (Survey 1: $M = .70$, $SD = .18$; Survey 3: $M = .69$, $SD = .19$).

Variables for Convergent and Discriminant Validity

Emotion Recognition: Reading the Mind in the Eyes (Survey 1 and Survey 3). Participants completed the 10-item RME test (Baron-Cohen et al., 2001; Woolley et al., 2010), a widely accepted and well-validated measure of emotion recognition and theory of mind (Baron-Cohen et al., 2001; Engel et al., 2014; Pinkham et al., 2014; Vellante et al., 2013) that correlates highly with scores on the comprehensive 141-item MSCEIT (Caruso et al., 2002; e.g., $r = .70$, Tso et al., 2010; $r = .56$, Mayer et al., 2012). For each question, participants were shown a three-inch section of a face that included the eyes and were asked to identify which emotion out of four choices best described what the person was feeling ($\alpha_{survey\ 1} = .50$; $\alpha_{survey\ 3} = .55$).[11]

Figure 2
Distribution of Status Acuity (Study 1b)



Cognitive Network Accuracy: DeSoto Ability to Learn Network Relations (Survey 2 and Survey 3). We measured network learning ability, which can predict outcomes such as power and reputation (Krackhardt, 1990), using the established "paired-associates" task (Brashears et al., 2016; De Soto, 1960; Flynn et al., 2006; Janicik & Larrick, 2005). Participants were given 12 statements describing dyadic advice relationships within a four-person group and were asked to recall them across three additional rounds ($\alpha_{survey\ 2} = .85$; $\alpha_{survey\ 3} = .76$).

Cognitive Ability: Raven's Progressive Matrices (Survey 2 and Survey 3). We measured fluid intelligence with the RPM, which asks participants to complete sequences of shapes with one shape missing (Raven, 2000). Participants had 10 min to try to solve 15 questions (Arthur & Day, 1994; $\alpha_{survey\ 2} = .82$; $\alpha_{survey\ 3} = .86$).

Cognitive Ability: Wonderlic Personnel Test (Survey 2 and Survey 3). We measured crystallized intelligence with the WPT, which has been used extensively in industrial and organizational psychology (Matthews & Lassiter, 2007; Wonderlic, 1973). Participants had 12 min to work on 50 short questions involving basic arithmetic, logic, and language comprehension (e.g., Woolley et al., 2010; $\alpha_{survey\ 2} = .91$; $\alpha_{survey\ 3} = .91$).

Big Five Personality (Survey 1). Participants completed the 10-item Big Five measure by Gosling et al. (2003).[12]

Variables for Predictive Validity

Self-Reported Consequences of Status Acuity at Work (Survey 1). As the first test of predictive validity, we tested whether status acuity as measured by the video test would positively relate to participants' accuracy in discerning the status hierarchies within their workplaces, and, assuming a baseline performance motivation, their ability to leverage their status accuracy to (a) learn valuable information and (b) indirectly wield influence via connections with high-status others. Indeed, Yu and Kilduff (2020) proposed these as two reasons why accurate perceptions of status hierarchies in one's primary groups benefit individual performance. We asked participants to report their agreement with: (a) "I know who to go to for advice when I need it"; (b) "I know who to pitch ideas to in order to make change happen"; (c) "I know the right

[10] We divided our initial set of measures across Surveys 1 and 2 to minimize participants' fatigue and distraction, rather than asking them to complete all measures at once. For Survey 3, which took place a year after the initial recruitment, we included status acuity and all related ability factors to ensure the maximum number of observations.

[11] Although the Cronbach's α values RME in our sample were relatively low, they were consistent with the prior work using this scale, which usually reported low to moderate level of internal consistency, $\alpha = .37$ (Khorashad et al., 2015), $\alpha = .48$ (Meyer & Shean, 2006), $\alpha = .60$ (Mar et al., 2006); $\alpha = .61$ (Vellante et al., 2013) or did not report alpha values (e.g., Baron-Cohen et al., 2001; Dietze & Knowles, 2021).

[12] We also measured several additional personality traits (e.g., self-monitoring). Please refer to pp. 5–6 of the SOM for their correlations with status acuity.

people to reach out to, to get things done"; and (d) "I'm aware of who holds the greatest sway over decisions," (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .83$).

Social Acceptance (Survey 1). Prior work finds accurate perception of one's own status within a group is positively related to social acceptance (Anderson et al., 2006). Participants indicated how much they felt "accepted," "liked," "included," and "welcomed" by their coworkers (Anderson et al., 2006; 1 = *not at all*, 7 = a *great deal*; $\alpha = .95$).

Work Performance (Survey 1). Accurate knowledge of the status hierarchy within one's own workgroup is positively related to work performance (Yu & Kilduff, 2020). Participants were asked to rate their performance at work, and to indicate how others in their work group would rate their performance, over the past month, on a scale of 0 (extremely poor) to 100 (extremely well; $\alpha = .87$; adapted from Wright & Cropanzano, 1998). Self-reported work performance is often highly correlated with supervisor- or coworker-rated work performance (Heidemeier & Moser, 2009; London & Wohlers, 1991).

Demographic Variables

We controlled for several demographic variables, namely, gender (1 = male, 2 = female), race (1 = White, 0 = non-White), age, education [1 = less than high school, 2 = high school degree, 3 = some college, 4 = associate's (2-year) degree, 5 = bachelor's (4-year) degree, 6 = professional or graduate degree], and tenure in the current organization in terms of years.

Results

We first conducted confirmatory factor analyses (CFA). CFA revealed goodness of fit indices showing our proposed unidimensional-factor structure fits the data well (Survey 1: comparative fit index [CFI] = .95; standardized root mean square residual [SRMR] = .049; the root mean square error of approximation [RMSEA] = .04; Survey 3: CFI > .99; SRMR = .06; RMSEA < .01).

To assess convergent validity, we examined zero-order correlations between status acuity and theoretically related variables, as shown in Table 1. These correlations were all moderate and significant, with an average of .33, supporting status acuity's convergent validity. To assess discriminant validity, we conducted comparative CFAs to compare the fits of a model that placed status acuity into its own factor with models that combined status acuity with each of the other theoretically related constructs, using a series of sequential chi-square (χ^2) difference tests (Bendersky & Hays, 2012; Kline, 2005). As shown in Table 2, the one-factor models with status acuity as its own, distinct, factor fit better than alternative models combining status acuity with other constructs; thus, status acuity was distinct from other individual social perceptual abilities as well as general cognitive ability. Moreover, we observed small correlations between status acuity and Big Five personality traits; the only significant correlation was between status acuity and extraversion ($r = -.19$, $p = .008$).

To assess predictive validity, for each outcome, we ran three models using ordinary least squares (OLS) regressions: A simple model with only status acuity, an intermediate model controlling for personality traits and demographics, and a full model additionally controlling for other social perceptual abilities. As shown in Table 3, status acuity positively predicted participants' self-reported consequences of status accuracy at work in the simple model, Model 1, $b = 1.20$, $t(194) = 2.49$, $p = .014$, $\eta_p^2 = .03$, 95% CI [.25, 2.14], 1–β = .69, intermediate model, Model 2, $b = 1.15$, $t(184) = 2.56$, $p = .011$, $\eta_p^2 = .03$, 95% CI [.26, 2.04], 1–β = .71, and full model, Model 3, $b = 1.36$, $t(180) = 2.82$, $p = .005$, $\eta_p^2 = .04$, 95% CI [.41, 2.31], 1–β = .78. Status acuity also positively predicted self-reported social acceptance, Model 4, simple model: $b = 1.15$, $t(194) = 2.25$, $p = .025$, $\eta_p^2 = .03$, 95% CI [.14, 2.15], 1–β = .61; Model 5, intermediate model: $b = 1.17$, $t(184) = 2.58$, $p = .011$, $\eta_p^2 = .04$, 95% CI [.28, 2.06], 1–β = .72; Model 6, full model: $b = 1.20$, $t(180) = 2.44$, $p = .016$, $\eta_p^2 = .03$, 95% CI [.23, 2.16], 1–β = .65; and work performance, Model 7, simple model: $b = 17.97$, $t(194) = 3.02$, $p = .003$, $\eta_p^2 = .04$, 95% CI [6.22, 29.73], 1–β = .76; Model 8, intermediate model: $b = 13.41$, $t(184) = 2.41$, $p = .017$, $\eta_p^2 = .03$, 95% CI [2.44, 24.38], 1–β = .64; Model 9, full model: $b = 14.20$, $t(180) = 2.31$, $p = .022$, $\eta_p^2 = .03$, 95% CI [2.07, 26.33], 1–β = .62.

To assess test–retest reliability, we found that the 1-year test–retest reliability coefficient of status acuity was $r = .64$ ($p < .0001$), which is fairly high and comparable to other social perceptual ability constructs (e.g., Fernández-Abascal et al., 2013 reported a 1-year test–retest reliability of .63 for RME). In our sample, the test–retest reliability coefficients were $r = .46$ ($p < .0001$) for RME, $r = .75$ ($p < .0001$) for RPM, $r = .68$ ($p < .0001$) for WPT, and $r = .50$ ($p < .0001$) for the DeSoto network accuracy task.

Discussion

In Study 1a, we developed a novel assessment of individuals' status acuity, and found evidence for its reliability and unidimensionality. Study 1b provided further evidence for status acuity's unidimensionality, as well as its internal consistency, convergent and discriminant validity, and long-term test–retest reliability. Moreover, status acuity predicted theoretically relevant individual-level outcomes (Anderson et al., 2006, 2008; Yu & Kilduff, 2020). Certain individuals were reliably better at discerning informal status hierarchies across groups, and this ability predicted their self-reported acceptance and performance in an entirely different context, their workgroups. Importantly, we measured status acuity via an ability test in which participants were not told how well they performed, thus avoiding sharing common methods with the measures of workplace outcomes. Although our primary focus here is on the group-level consequences of status acuity, these results extend existing work on status accuracy by showing the importance of the more general ability of status acuity for individuals' success in organizations. In sum, Studies 1a and 1b provide consistent evidence for the validity and utility of the status acuity assessment.

Study 2: Status Acuity, Status Conflict, and Group Performance in an Idea-Generation Task

Study 2 provided a first test of the group-level consequences of status acuity. Participants were 186 undergraduate students enrolled in an introductory management class at a business school on the U.S. East Coast (44.62% female; $M_{age} = 18.97$, $SD_{age} = .98$; 4.3% Black, 27.96% Caucasian, 36.56% East Asian, 9.14% South Asian, 11.29% Hispanic, and 10.75% other race) who took part in this study in exchange for course credit. We did not predetermine sample sizes; rather, we utilized as many participants as this course-credit

Table 1
Descriptive Statistics and Zero-Order Correlations of Study 1b

Variable	*M*	*SD*	*N*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Status acuity (Survey 1)	0.70	0.18	196	—																					
2. Emotional recognition accuracy: RME (Survey 1)	8.05	1.65	196	.32**	—																				
3. Cognitive ability: RPM (Survey 2)	9.14	3.41	149	.37**	.06	—																			
4. Cognitive ability: WPT (Survey 2)	27.32	8.69	149	.17*	−.13	.30**	—																		
5. Cognitive network accuracy: DeSoto (Survey 2)	24.32	6.65	149	.23**	.14+	.46**	.21**	—																	
6. Status acuity (Survey 3)	0.69	0.19	101	.64**	.31**	.43**	.12	.20+	—																
7. Emotional recognition accuracy: RME (Survey 3)	8.61	1.48	101	.32**	.46**	.25*	−.03	.16	.51**	—															
8. Cognitive ability: RPM (Survey 3)	8.34	3.80	101	.46**	.19+	.75**	.31**	.42**	.52**	.34**	—														
9. Cognitive ability: WPT (Survey 3)	28.88	8.98	101	.27**	−.04	.39**	.68**	.26*	.27**	.12	.45**	—													
10. Cognitive network accuracy: DeSoto (Survey 3)	23.43	5.66	101	.26**	.18+	.38**	.09	.50**	.25*	.24*	.50**	.22*	—												
11. Self-reported status acuity at the workplace (Survey 1)	5.44	1.23	196	.18*	−.07	.01	.01	−.01	.15	.17+	.06	−.17+	.09	—											
12. Social acceptance (Survey 1)	5.64	1.30	196	.16*	−.01	−.05	.07	.11	.19+	.14	.02	−.14	.26**	.58**	—										
13. Work performance (Survey 1)	80.86	15.43	196	.21**	.12	−.08	−.03	.17*	.11	.27**	.10	.04	.14	.45**	.51**	—									
14. Extraversion (Survey 1)	3.71	1.78	196	−.19**	−.06	−.27**	−.07	−.18*	−.09	.09	−.23*	−.27**	−.02	.24**	.34**	.14*	—								
15. Agreeableness (Survey 1)	5.23	1.35	196	.11	.15*	−.09	−.08	.05	.08	.06	−.03	−.15	.10	.22**	.37**	.34**	.23**	—							
16. Conscientiousness (Survey 1)	5.59	1.23	196	.05	.04	−.12	−.14+	.06	.06	.07	−.03	−.18+	.07	.37**	.39**	.40**	.19**	.47**	—						
17. Openness (Survey 1)	3.68	1.10	196	.10	.03	.05	.04	−.06	.19+	.23*	.00	−.03	−.05	−.09	−.02	.02	.10	.11	−.47**	—					
18. Emotional stability (Survey 1)	5.16	1.55	196	.04	−.02	−.12	−.00	.05	.07	.12	−.02	−.13	.04	.42**	.46**	.39**	.36**	.40**	.55**	−.14*	—				
19. Gender (1 = male, 2 = female; Survey 1)	1.42	0.50	196	−.03	.11	−.19*	−.29**	.04	−.04	.02	−.15	−.19+	.20*	−.01	.09	.12	−.04	.17*	.14	−.03	−.01	—			
20. Race (1 = White, 0 = non-White; Survey 1)	0.79	0.41	196	.05	.04	.09	.12	.05	.02	.23*	.09	.10	.13	.09	.08	.12	−.01	.08	.02	.06	.07	−.07	—		
21. Age (Survey 1)	34.26	9.54	196	.11	.13+	−.02	−.04	.08	.11	.27**	.10	−.18+	.04	.15*	.11	.17*	−.00	.05	.11	.01	.04	.11	.17*	—	
22. Education (Survey 1)	4.09	1.22	196	−.05	−.03	.05	.24**	.04	.04	−.09	.04	.21*	−.08	−.08	−.08	.01	.15*	.02	.10	−.06	.03	−.15*	−.08	−.03	—
23. Tenure (Survey 1)	5.35	4.85	196	.07	.09	−.16+	.01	.04	.11	.09	−.07	−.12	−.02	.13	.06	.05	.05	−.02	−.00	.07	.07	.10	.14*	.48**	−.06

Note. $N = 196$ (Survey 1)/149 (Survey 2)/101 (Survey 3). As noted earlier, due to the length of total tests, data were collected in three different surveys. As a result, the number of participants who completed each of the measures varied, which were listed in the column "*N*." Variables without parentheses were all assessed in Survey 1. RME = reading the mind in the eyes; RPM = Raven's progressive matrices; WPT = Wonderlic personnel test; DeSoto = DeSoto ability to learn exchange relations task.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

Table 2
Confirmatory Factor Analysis and Sequential χ^2 Difference Tests

Measurement models	χ^2	*df*	*p*
Baseline model 1: One-factor model of status acuity (Survey 1)	37.351	27	<.001
One-factor model of status acuity (Survey 1) and RME (Survey 1)	241.035	152	<.001
Difference from baseline Model 1	203.68	125	<.001
One-factor model of status acuity (Survey 1) and RPM (Survey 2)	453.004	252	<.001
Difference from baseline Model 1	415.65	225	<.001
One-factor model of status acuity (Survey 1) and WPT (Survey 2)	3797.533	1,652	<.001
Difference from baseline Model 1	3760.2	1,625	<.001
One-factor model of status acuity (Survey 1) and DeSoto (Survey 2)	190.117	54	<.001
Difference from baseline Model 1	152.76	27	<.001
Baseline Model 2: One-factor model of status acuity (Survey 3)	25.843	27	<.001
One-factor model of status acuity (Survey 3) and RME (Survey 3)	195.611	152	<.001
Difference from baseline Model 2	169.77	125	<.001
One-factor model of status acuity (Survey 3) and RPM (Survey 3)	366.517	252	<.001
Difference from baseline Model 2	340.67	225	<.001
One-factor model of status acuity (Survey 3) and WPT (Survey 3)[a]	3413.101	1,595	<.001
Difference from baseline Model 2	3387.3	1,568	<.001
One-factor model of status acuity (Survey 3) and DeSoto (Survey 3)	131.887	54	<.001
Difference from baseline Model 2	106.04	27	<.001

Note. $N = 196$ (Survey 1)/149 (Survey 2)/101 (Survey 3). RME = reading the mind in the eyes; RPM = Raven's progressive matrices; WPT = Wonderlic personnel test; DeSoto = DeSoto ability to learn exchange relations task.
[a] One item in WPT (Survey 3) had no variance (i.e., all participants correctly answered that question) and was removed from the analysis.

pool was able to supply, which was jointly determined by the course enrollment and the behavioral lab's participants allocation.

Method

Procedure and Measures

Upon arriving at the laboratory, participants were placed in a group of two to four people, depending on the total number of participants who showed up to each session (51 total groups, $M_{size} = 3.65$, 44 groups had three or four members).[13] Participants worked together on a task that involved proposing an initiative for the school's career center to address challenges that undergraduates face in obtaining employment, adapted from Anderson and Kilduff (2009b). This task was designed to approximate what teams in work organizations often face: identifying challenges and proposing novel and effective solutions. Groups were asked to identify a primary issue/challenge and describe why they thought this issue/challenge was important, how their initiative would help to address the issue/challenge, their strategic plan for the initiative, and the major goals and actionable strategies for the initiative (for the full task instructions, see p. 21 of the SOM). Participants worked on the group task for 20 min and then individually completed a posttask survey, after which they completed measures of status acuity and emotion recognition/theory of mind and indicated their demographics and other characteristics (e.g., grade point average [GPA]). Participants were subsequently debriefed, thanked, and dismissed.

Group Average and Minimum Status Acuity. Participants completed the nine-item video assessment of status acuity from Studies 1a and 1b ($\alpha = .67$; $M = .70$, $SD = .19$; see Figure 3, for the distribution of status acuity). Then, to test our hypotheses, we created variables equal to the mean level of status acuity in the group, as well as the lowest individual member's score.

Status Conflict. Participants completed status conflict measures drawn from Bendersky and Hays [2012; 4 items, i.e., "my group members competed for influence," "my group members disagreed about the relative value of members' contributions," "my group members experienced conflicts due to members trying to assert their dominance," "my group members frequently took sides (i.e., formed coalitions) during conflicts"; $\alpha = .87$] on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Groups showed sufficient interrater agreement [$r_{wg\ (M)} = .89$, $r_{wg\ (mdn)} = .97$; $a_{wg\ (M)} = .94$, $a_{wg\ (mdn)} = 1$ (Brown & Hauenstein, 2005; James et al., 1984)][14] and intra-class correlation coefficients [ICC](1) = .13; ICC(2) = .36; $F(50, 135) = 1.55$, $p = .024$; Bliese, 2000.[15]

Group Performance. Two independent coders who were blind to our hypotheses scored each group's proposal on the quality of responses to each specific question as well as the overall proposal.[16]

[13] Results are similar if excluding groups that had two people ($N = 7$), for details, see pp. 6–7 of the SOM.

[14] In this sample, r_{wg} values range from 0 to 1, and a_{wg} in this sample ranges from −.80 to 1. In the main analyses, we did not discard observations purely based on these values, because such exclusion should be done with caution (Brown & Hauenstein, 2005; LeBreton & Senter, 2008). Instead, we presented results excluding groups that failed to achieve at least moderate agreement [.50 (LeBreton & Senter, 2008); two groups using r_{wg} and three groups using a_{wg}] in the SOM (pp. 9–10) and found consistent effects.

[15] Although ICC indices do not have an absolute standard (Biemann et al., 2012), the general thresholds for acceptable ICC(1) and ICC(2) are .12 (James, 1982; Schneider et al., 1998) and .60 (Glick, 1985), respectively. However, because ICC(2) is a function of the number of raters and ICC(1), a small team size will often lead to a lower than ideal ICC(2) value (Gong et al., 2009). Recent work notes that values greater than .25 ICC(2) are still acceptable, conditional on high r_{wg}, ICC(1) values, and significant *F*-test results (Chiu et al., 2016; Dietz et al., 2015; Dong et al., 2015), which is satisfied in our case. In fact, because low ICC(2)s decrease the chance of finding group-level effects, our tests can be considered conservative (Bliese, 2000; Greer & van Kleef, 2010).

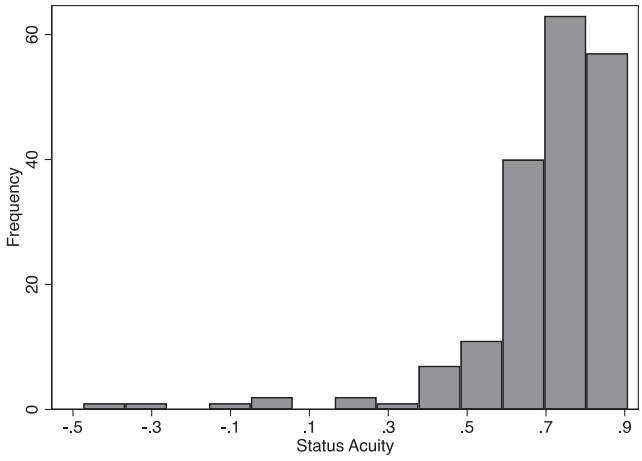
[16] Identified issue/challenge (four points maximum), importance of the issue/challenge (six points), how to address the issue/challenge (eight points), initiative branding (five points), goals identification (six points), strategies to achieve the identified goals (six points), as well as scoring the overall quality of the proposal (10 points), overall creativity of the proposal (10 points), and their subjective liking of the proposal (10 points).

Table 3
OLS Regression Results for the Predictive Validity of Status Acuity

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		Model 9	
	Self-reported status acuity at the workplace						Social acceptance						Work performance					
Variable	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Status acuity	1.20*	(0.48)	1.15*	(0.45)	1.36**	(0.48)	1.15*	(0.51)	1.17*	(0.45)	1.20*	(0.49)	17.97**	(5.96)	13.41*	(5.56)	14.20*	(6.15)
Emotional recognition accuracy: RME					−0.12*	(0.05)					−0.06	(0.05)					0.29	(0.64)
Cognitive ability: RPM					0.02	(0.03)					−0.00	(0.03)					−0.42	(0.37)
Cognitive ability: WPT					0.00	(0.01)					0.02+	(0.01)					0.05	(0.14)
Cognitive network accuracy: DeSoto					−0.02**	(0.01)					−0.01	(0.01)					−0.05	(0.11)
Extraversion			0.12*	(0.05)	0.12*	(0.05)			0.18**	(0.05)	0.19**	(0.05)			0.14	(0.62)	0.02	(0.63)
Agreeableness			−0.03	(0.07)	−0.01	(0.07)			0.11	(0.07)	0.12	(0.07)			0.55	(0.91)	0.45	(0.92)
Conscientiousness			0.22*	(0.10)	0.23*	(0.10)			0.17+	(0.10)	0.19+	(0.10)			3.91**	(1.23)	3.96**	(1.25)
Openness			−0.00	(0.09)	−0.01	(0.09)			0.03	(0.09)	0.03	(0.09)			2.41*	(1.12)	2.48*	(1.13)
Stability			0.19**	(0.06)	0.16*	(0.06)			0.20**	(0.07)	0.18**	(0.07)			2.03*	(0.80)	2.00*	(0.81)
Gender			−0.11	(0.17)	−0.04	(0.16)			0.12	(0.17)	0.20	(0.17)			2.35	(2.04)	2.14	(2.10)
White			0.10	(0.20)	0.14	(0.19)			0.08	(0.20)	0.06	(0.20)			2.77	(2.42)	3.02	(2.47)
Age			0.01	(0.01)	0.01	(0.01)			0.01	(0.01)	0.01	(0.01)			0.18	(0.12)	0.17	(0.12)
Education			−0.13+	(0.07)	−0.12+	(0.07)			−0.13*	(0.07)	−0.16*	(0.07)			0.06	(0.81)	0.07	(0.84)
Tenure			0.01	(0.02)	0.01	(0.02)			−0.01	(0.02)	−0.01	(0.02)			−0.17	(0.23)	−0.23	(0.24)
Constant	4.61**	(0.35)	2.35**	(0.75)	3.16**	(0.87)	4.84**	(0.37)	1.56*	(0.75)	1.48+	(0.89)	68.35**	(4.29)	15.89+	(9.26)	17.22	(11.13)
R-squared	0.03		0.27		0.33		0.03		0.35		0.37		0.04		0.29		0.30	

Note. $N = 196$ individuals. Standard errors in parentheses. Unstandardized β coefficients. In running analyses, we imputed missing values for RME, RPM, and DeSoto, rather than excluding participants who did not complete Survey 2. This is because we aimed to maximize our statistical power; and participants who did not complete Survey 2 may be differed meaningfully from participants who did, and thus excluding them would result in a biased sample. Thus, rather than conduct our analyses on a smaller and potentially biased sample, we used established techniques for imputing the missing values. It is worth noting that we have complete data for status acuity and our dependent measures for all participants from Survey 1; only certain control variables were imputed. All results reported are from analyses in which missing values were replaced by the mean values across all other participants on each measure (Schafer & Graham, 2002). As a second imputation technique, we replaced the missing values by applying multiple imputations, which entails using regression models to predict missing values from participants' other data (Rubin, 1987). The results of significance tests were very similar to the multiple imputations method (for details, see p. 6 of the SOM). RME = reading the mind in the eyes; RPM = Raven's progressive matrices; WPT = Wonderlic personnel test; DeSoto = DeSoto ability to learn exchange relations task.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

Figure 3
Distribution of Status Acuity (Study 2)



Intercoder agreement was high ($r = .70$, $p < .0001$), so we took their average as the measure of group performance ($M = 44.2$, $SD = 8.28$, $min = 28$, $max = 61$). One group left a blank proposal and was eliminated from analysis.

Control Variables. We controlled for several variables to account for possible alternative explanations.

Group Average Emotion Recognition Ability. Higher average emotion recognition and theory of mind ability may facilitate group processes and benefit group performance (Day & Carroll, 2004; Woolley et al., 2010), and this was positively correlated with status acuity in our validation studies. Thus, we controlled for the average of group members' RME scores, measured the same way as in Study 1b.

Group Average Cognitive Ability. Average levels of cognitive ability are positively related to group performance (Neuman & Wright, 1999), and we found a significant correlation between status acuity and cognitive ability. Due to time constraints, instead of administering a cognitive intelligence test, we collected participants' GPAs, which research shows are strongly correlated with intelligence quotient [IQ] (e.g., $r = .67$ (Furnham et al., 2009)), and controlled for group-level average GPA.

Group Gender and Racial Composition. Groups' gender and racial compositions can affect group performance (Baugh & Graen, 1997; Woolley et al., 2010) and may also relate to group dynamics (van Knippenberg et al., 2007). Therefore, we controlled for the percentage of females (Woolley et al., 2010) and the percentage of each ethnic group in each group (Townsend & Scott, 2001).

Group Size. Prior literature on groups and teams suggests group size may negatively influence group processes (Mueller, 2012), including intra-group dynamics related to influence (Edmondson, 1999), so we controlled for group size.

Results

Correlations between variables are presented in Table 4, and Table 5 displays results from OLS regressions with the group as the unit of analysis. We present results with and without control variables. Supporting Hypothesis 1, average status acuity negatively predicted group status conflict in a simple model without control variables, Model 1, $b = -2.34$, $t(49) = 3.54$, $p < .001$, $\eta_p^2 = .20$, 95% CI [−3.66, −1.01], 1–β = .86, as well as in the full model, Model 2, $b = -2.93$, $t(40) = 5.15$, $p < .001$, $\eta_p^2 = .40$, 95% CI [−4.08, −1.78], 1–β = .98. To illustrate, a group one standard deviation above the mean in average status acuity across its members would be predicted to experience 15.5% less status conflict than a group at the sample mean level of average status acuity. We then tested our full theoretical model by testing the indirect effect of average status acuity on group performance, via reduced status conflict. Average status acuity had a significant positive direct effect on group performance in both a simple model without control variables, $b = 22.53$, $t(48) = 2.13$, $p = .038$, $\eta_p^2 = .09$, 95% CI [1.29, 43.76], 1–β = .56, and a full model with control variables, $b = 23.93$, $t(39) = 2.42$, $p = .02$, $\eta_p^2 = .13$, 95% CI [3.93, 43.93], 1–β = .67. Further, supporting Hypothesis 2, bootstrapping with 5,000 repetitions revealed a significant indirect effect of average status acuity on group performance via reduced status conflict, without controls: $b = 13.05$, 95% CI [2.24, 32.38]; with all controls included: $b = 20.16$, 95% CI [2.58, 43.67]. Thus, groups with higher average levels of status acuity performed better due to reduced status conflict.

To test our exploratory hypotheses, we next examined the effects of the minimum level of status acuity on group status

Table 4
Descriptive Statistics and Zero-Order Correlations of Study 2

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Group average status acuity	0.69	0.11	—										
2. Group emotional recognition accuracy (RME)	7.70	0.81	−.01	—									
3. Group cognitive ability (GPA)	3.44	0.21	−.22	.16	—								
4. Group % of female	0.44	0.44	−.01	.18	−.03	—							
5. Group % of White	0.29	0.25	−.18	.10	.06	−.08	—						
6. Group % of African American	0.04	0.10	.03	.06	−.33*	.06	−.19	—					
7. Group % of East Asian	0.38	0.28	.06	.09	.28+	.05	−.51**	−.13	—				
8. Group % of South Asian	0.08	0.13	.03	−.04	.08	−.23	−.01	−.08	−.28*	—			
9. Group % of Hispanic	0.11	0.16	.04	−.12	−.10	.33*	−.29*	−.05	−.25+	−.21	—		
10. Group size	3.65	0.72	.16	.02	.00	.10	−.23	.12	−.19	.25+	.16	—	
11. Status conflict	1.75	0.56	−.45**	−.25+	−.00	−.02	−.22	.14	.16	.00	−.20	.23	—
12. Group performance	44.20	8.28	.29*	.16	.07	.36*	.02	−.24+	−.03	.17	.22	.21	−.44**

Note. $N = 51$ groups ($N = 50$ for group performance). GPA = grade point average; RME = reading the mind in the eyes.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

Table 5
OLS Regression Results for Group Status Acuity on Status Conflict (Study 2)

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Status conflict				Status conflict				Status conflict			
Variable	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Group average status acuity	−2.34**	(0.66)	−2.93**	(0.57)								
Group minimum status acuity					−1.05**	(0.27)	−1.10**	(0.24)				
Group maximum status acuity									−1.08	(1.49)	−3.33+	(1.67)
Group average RME			−0.20*	(0.08)			−0.19*	(0.08)			−0.23*	(0.09)
Group average GPA			−0.21	(0.34)			−0.11	(0.35)			−0.09	(0.43)
Group % of female			0.10	(0.15)			0.17	(0.16)			0.03	(0.19)
Group % of White			−0.80+	(0.45)			−0.75	(0.47)			−0.64	(0.55)
Group % of African American			−0.03	(0.74)			−0.21	(0.77)			0.35	(0.91)
Group % of East Asian			−0.08	(0.43)			−0.16	(0.45)			0.09	(0.56)
Group % of South Asian			−0.73	(0.59)			−0.68	(0.62)			−0.65	(0.74)
Group % of Hispanic			−1.59*	(0.60)			−1.71**	(0.62)			−1.27	(0.76)
Group size			0.27**	(0.09)			0.20*	(0.10)			0.28*	(0.12)
Constant	3.37**	(0.46)	5.48**	(1.28)	2.29**	(0.15)	3.85**	(1.22)	2.63*	(1.23)	5.83*	(2.21)
R-squared	0.20		0.57		0.24		0.53		0.01		0.35	

Note. $N = 51$ groups. Standard errors in parentheses. Unstandardized β coefficients. GPA = grade point average; RME = reading the mind in the eyes.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

conflict. Supporting Hypothesis 3, group minimum status acuity negatively predicted group status conflict in a simple model without control variables, Model 3, $b = -1.05$, $t(49) = 3.94$, $p < .001$, $\eta_p^2 = .24$, 95% CI [−1.58, −.51], 1–β = .95, and in the full model, Model 4, $b = -1.10$, $t(40) = 4.62$, $p < .001$, $\eta_p^2 = .35$, 95% CI [−1.58, −.62], 1–β = .98. Group minimum status acuity also had a significant positive direct effect on group performance in a simple model, $b = 9.39$, $t(48) = 2.17$, $p = .035$, $\eta_p^2 = .09$, 95% CI [.67, 18.10], 1–β = .58, and in a full model, $b = 8.41$, $t(39) = 2.10$, $p = .042$, $\eta_p^2 = .10$, 95% CI [.32, 16.50], 1–β = .54. The coefficient for group minimum status acuity was smaller than the coefficient for group average status acuity, and this difference was statistically significant based on a Wald chi-square test, status conflict: $\chi^2(1) = 26.46$, $Prob > \chi^2 < .001$; group performance: $\chi^2(1) = 10.55$, $Prob > \chi^2 = .001$. Supporting Hypothesis 4, bootstrapping with 5,000 repetitions revealed a significant indirect effect of minimum group status acuity on group performance via reduced status conflict (without controls: $b = 5.88$, 95% CI [.88, 13.17]; with all controls included: $b = 8.08$, 95% CI [.74, 18.19]).

For exploratory purposes, we also examined groups' maximum and variance in status acuity. We report analyses of maximum status acuity here, and analyses of variance in status acuity in the online Supplemental Materials (SOM, p. 7 and p. 11). Maximum status acuity had inconsistent effects on status conflict, simple model, Model 5: $b = -1.08$, $t(49) = .72$, $p = .48$, $\eta_p^2 = .01$, 95% CI [−4.08, 1.93], 1–β = .17; full model, Model 6: $b = -3.33$, $t(40) = 2.00$, $p = .052$, $\eta_p^2 = .09$, 95% CI [−6.70, .03], 1–β = .52, and group performance, simple model: $b = 31.00$, $t(48) = 1.41$, $p = .16$, $\eta_p^2 = .04$, 95% CI [−13.10, 75.11], 1–β = .28; full model: $b = 51.15$, $t(39) = 2.12$, $p = .04$, $\eta_p^2 = .10$, 95% CI [2.40, 99.90], 1–β = .56.

Discussion

In Study 2, we found that groups composed of members with a higher average level of status acuity experienced less status conflict, leading to better performance on an idea-generation task. These effects remained after controlling for various other important factors, including average emotion recognition/theory of mind and cognitive ability. Interestingly, the minimum level of status acuity within a group was also a significant determinant of status conflict and group performance, suggesting that groups may particularly suffer from having individual "bad apples" who can singlehandedly disrupt group status dynamics due to their very low status acuity.

Study 3: Status Acuity, Status Conflict, and Group Performance in a Problem-Solving Task Participants

In Study 3, we sought to replicate our findings from Study 2 using a different type of group task: A decision-making task that did not involve idea generation or writing, yet still required the group to make important joint decisions. This task also allowed us to control for participants' individual task performance, thus addressing a possible alternative explanation that the positive effects of status acuity might be due to an unobserved correlation between status acuity and task ability. A total of 329 undergraduate students enrolled in an introductory management class at a business school on the U.S. East Coast (45.59% female; $M_{age} = 19.13$, $SD_{age} = 1.13$; 3.04% were Black, 26.44% White, 38.3% East Asian, 14.89% South Asian, 12.77% Hispanic, and 4.56% other race) took part in exchange for course credit. As in Study 2, we did not predetermine our sample sizes and used as many participants as the pool could supply.

Method

Procedure and Measures

Upon arriving at the laboratory, participants were placed in a group of two to four people, depending on the number of participants who showed up ($N = 90$ groups, $M_{size} = 3.66$, 88 groups had three or four members).[17] Participants worked on a "Lost at Sea" survival exercise (Adams et al., 2005; Littlepage et al., 1997), which

[17] Results are similar if we exclude groups that had two people ($N = 2$); for details, see pp. 10–11 of the SOM.

involves ranking the importance of 12 items (e.g., a quart of water, flashlight) to surviving while lost at sea. This task is designed to approximate decision-making processes in organizations, where group members must work together to come up with joint decisions. Participants worked for 10 min individually and then for 15 min in their groups to come up with a final set of group rankings (for the full task instructions, see p. 22 of the SOM).[18] After the task, participants rated the status conflict in their groups and then completed a separate survey that included assessments of their status acuity and RME as in the prior studies, as well as their demographics and other characteristics (e.g., GPA). Participants were subsequently debriefed, thanked, and dismissed.

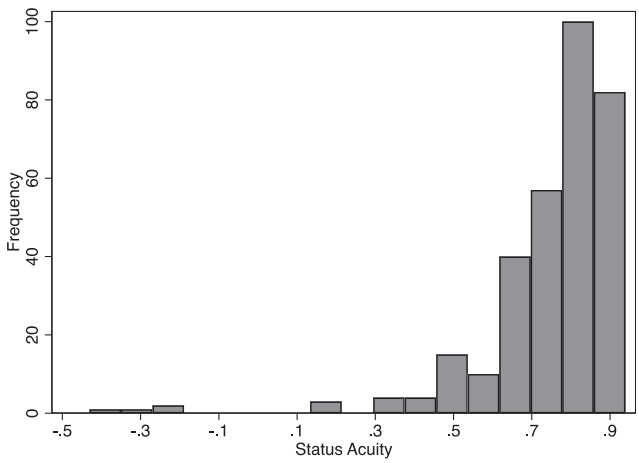
Group Average and Minimum Status Acuity. Due to the fixed lab hour and the longer logistics of the task (i.e., the inclusion of an individual phase of task work), we had to shorten the status-acuity measure. Participants completed a shortened version of the status acuity assessment containing the six highest loading items (video clips) from the original nine ($\alpha = .59$; $M = .76$, $SD = .18$; see Figure 4, for the distribution of status acuity), and we again examined the average and minimum status acuity scores in the groups.

Status Conflict. Participants completed the same measures of status conflict as in Study 2, $\alpha = .84$; $r_{wg\ (M)} = .82$, $r_{wg\ (mdn)} = .94$, $a_{wg\ (M)} = .95$, $a_{wg\ (mdn)} = 1$[19]; ICC(1) = .31; ICC(2) = .63; $F(89, 239) = 2.68$, $p < .001$.

Group Performance. We measured group performance as the discrepancy between the group's rankings and an established expert ranking (Adams et al., 2005; Littlepage et al., 1997), summed across the 12 items and subtracted from a constant so that higher scores reflect higher performance ($M = 29.48$, $SD = 8.39$, $min = 9$, $max = 49$).

Control Variables. As in Study 2, we controlled for group average RME and cognitive ability, group gender and racial composition, and group size. In addition, we controlled for members' average task ability, based on participants' individual rankings prior to group discussion. As a result, our analyses in effect examine how much groups improved upon (or possibly did worse than) their individual members' average task ability.

Figure 4
Distribution of Status Acuity (Study 3)



Results

Table 6 displays correlations between variables, and Table 7 displays results from group-level OLS regressions. Supporting Hypothesis 1, average status acuity negatively predicted status conflict in a simple model without control variables, Model 1, $b = -1.90$, $t(85) = 2.38$, $p = .019$, $\eta_p^2 = .06$, 95% CI [−3.48, −.31], 1–β = .65, as well as in the full model with all additional variables controlled for, Model 2, $b = -1.89$, $t(75) = 2.30$, $p = .024$, $\eta_p^2 = .07$, 95% CI [−3.52, −.25], 1–β = .63. To illustrate, a group that is one standard deviation above the sample mean in average status acuity would be predicted to experience 14.1% less status conflict than a group at the sample mean level of average status acuity. We then tested our full model by testing the indirect effect of average status acuity on group performance, via reduced status conflict. Average status acuity had a marginally positive direct effect on group performance in a full model, $b = 14.17$, $t(75) = 1.70$, $p = .09$, $\eta_p^2 = .04$, 95% CI [−2.45, 30.80], 1–β = .42; this direct effect was not significant in a simple model, $b = 11.47$, $t(85) = 1.36$, $p = .18$, $\eta_p^2 = .02$, 95% CI [−5.31, 28.26], 1–β = .24. However, bootstrapping with 5,000 repetitions revealed a significant indirect effect, without controls: $b = 7.01$, 95% CI [1.57, 14.88]; with all controls included: $b = 6.71$, 95% CI [1.10, 16.09], of average status acuity on group performance, via reduced status conflict. Hypothesis 2 was supported.

We next tested our exploratory hypotheses regarding the effects of the minimum level of status acuity on our outcomes. Supporting Hypothesis 3, group minimum status acuity negatively predicted group status conflict in a simple model without control variables, Model 3, $b = -.80$, $t(85) = 2.35$, $p = .021$, $\eta_p^2 = .06$, 95% CI [−1.47, −.12], 1–β = .64, and in the full model, Model 4, $b = -.84$, $t(75) = 2.38$, $p = .02$, $\eta_p^2 = .07$, 95% CI [−1.54, −.14], 1–β = .67. Group minimum status acuity had a nonsignificant effect on group performance, in a simple model: $b = 2.67$, $t(85) = .74$, $p = .46$, $\eta_p^2 = .01$, 95% CI [−4.54, 9.88], 1–β = .06; in a full model: $b = 3.68$, $t(75) = 1.01$, $p = .32$, $\eta_p^2 = .01$, 95% CI [−3.58, 10.93], 1–β = .18. For status conflict, the coefficient for group minimum status acuity was larger than the coefficient for group average status acuity ($\chi^2 = 5.34$, $Prob > \chi^2 = .021$), but the reverse was true for group performance ($\chi^2 = 5.52$, $Prob > \chi^2 = .019$). Supporting Hypothesis 4, bootstrapping with 5,000 repetitions revealed a significant indirect effect of group minimum status acuity on group performance via reduced status conflict, without controls: $b = 3.09$, 95% CI [.97, 6.43]; with all controls included: $b = 3.17$, 95% CI [.79, 7.45].

As in Study 2, we examined maximum status acuity as a point of comparison and found it primarily had nonsignificant effects on status conflict, simple model, Model 5: $b = -2.37$, $t(85) = 1.67$, $p = .099$, $\eta_p^2 = .03$, 95% CI [−5.20, .45], 1–β = .36; full model, Model 6: $b = -2.19$, $t(75) = 1.43$, $p = .16$, $\eta_p^2 = .03$, 95% CI [−5.26, .87], 1–β = .30, and mixed effects on group performance, simple model:

[18] We eliminated three groups from analysis, including two groups that violated the instructions and discussed the task with each other during the individual portion, and one group that rushed to complete the group discussion within 5 min.

[19] In this sample, r_{wg} values range from 0 to 1, and a_{wg} in this sample ranges from .31 to 1. In the main analyses, we did not discard observations purely based on these values but presented results excluding groups that failed to achieve at least moderate agreement [.50 (LeBreton & Senter, 2008); eight groups using r_{wg} and three groups using a_{wg}] in the SOM and found similar results (pp. 12–13).

Table 6
Descriptive Statistics and Zero-Order Correlations of Study 3

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Group status acuity	0.75	0.11	—											
2. Member-task ability	22.73	5.12	−.05	—										
3. Group emotional recognition accuracy (RME)	7.44	0.68	.09	.00	—									
4. Group cognitive ability (GPA)	3.50	0.18	−.06	.15	−.16	—								
5. Group % of female	0.47	0.25	.01	−.04	.23*	.06	—							
6. Group % of White	0.26	0.23	.04	.19+	.05	.11	−.09	—						
7. Group % of African American	0.03	0.09	.11	−.06	.18+	−.01	.21+	−.00	—					
8. Group % of East Asian	0.39	0.25	−.18	.01	−.02	.01	.08	−.35**	−.21+	—				
9. Group % of South Asian	0.14	0.21	.11	−.16	−.00	−.17	.02	−.34**	−.16	−.36**	—			
10. Group % of Hispanic	0.13	0.18	.04	−.02	−.25*	.05	−.17	−.22*	−.12	−.31**	−.15	—		
11. Group size	3.67	0.52	.00	−.03	.08	−.17	−.07	−.07	−.09	−.05	.15	.00	—	
12. Status conflict	1.95	0.81	−.25*	−.01	−.09	.02	.09	.20+	−.01	−.07	−.06	−.13	−.09	—
13. Group performance	29.48	8.39	.15	.32**	.03	.01	−.07	.03	−.15	.03	−.12	.15	.12	−.37**

Note. $N = 87$ groups. GPA = grade point average; RME = reading the mind in the eyes.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

$b = 21.33$, $t(85) = 1.44$, $p = .15$, $\eta_p^2 = .02$, 95% CI [−8.12, 50.78], 1–β = .29; full model: $b = 31.93$, $t(75) = 2.11$, $p = .038$, $\eta_p^2 = .06$, 95% CI [1.74, 62.13], 1–β = .58.

Discussion

Study 3 further supported our theory that individuals' status acuity shapes group dynamics. Groups whose members had higher status acuity on average experienced less status conflict, which subsequently benefited performance on a group decision-making task. Additionally, we again found some evidence for a "bad apple" effect in that the lowest scoring member's status acuity also predicted these outcomes. Importantly, we observed these effects while controlling for variables that have been found critical to group performance, such as members' emotion recognition/theory of mind and cognitive ability.

General Discussion

Status hierarchies are fundamental to human life, often serving as the primary organizing structure within groups and strongly influencing the success of individuals. In this research, we explored whether there is a dimension of ability specifically related to the accurate perception of status hierarchies. Across our studies, we demonstrated and validated the existence of status acuity and found that groups composed of members with higher status acuity experienced lower status conflict during group interactions, which in turn predicted increased performance on both creative idea-generation and problem-solving tasks. Our work extends knowledge of the drivers of functional versus dysfunctional status dynamics, and reveals a novel, group-focused dimension of individual ability, thus providing an answer to the question of what determines how good people are at working in groups.

Table 7
OLS Regression Results for Group Status Acuity on Status Conflict (Study 3)

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Status conflict				Status conflict				Status conflict			
Variable	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Group average status acuity	−1.90*	(0.80)	−1.89*	(0.82)								
Group minimum status acuity					−0.80*	(0.34)	−0.84*	(0.35)				
Group maximum status acuity									−2.37+	(1.42)	−2.19	(1.54)
Member-task ability			−0.01	(0.02)			−0.01	(0.02)			−0.01	(0.02)
Group average RME			−0.19	(0.14)			−0.19	(0.14)			−0.20	(0.14)
Group average GPA			−0.28	(0.49)			−0.34	(0.49)			−0.22	(0.50)
Group % of female			0.43	(0.37)			0.38	(0.37)			0.45	(0.38)
Group % of White			−0.20	(0.84)			−0.28	(0.84)			−0.23	(0.86)
Group % of African American			−1.32	(1.35)			−1.32	(1.35)			−1.50	(1.38)
Group % of East Asian			−1.24	(0.86)			−1.31	(0.86)			−1.20	(0.88)
Group % of South Asian			−1.04	(0.92)			−1.14	(0.91)			−1.03	(0.95)
Group % of Hispanic			−1.47	(0.96)			−1.55	(0.96)			−1.53	(0.98)
Group size			−0.12	(0.17)			−0.17	(0.17)			−0.07	(0.17)
Constant	3.38**	(0.61)	7.13**	(2.57)	2.43**	(0.22)	6.61*	(2.52)	4.00**	(1.23)	7.31**	(2.75)
R-squared	0.06		0.17		0.06		0.17		0.03		0.14	

Note. $N = 87$ groups. Standard errors in parentheses. Unstandardized beta coefficients. GPA = grade point average; RME = reading the mind in the eyes.
$^{+}p < .1$, two-tailed tests. $^{*}p < .05$. $^{**}p < .01$.

Theoretical Contributions

The current research offers several theoretical contributions to research on status hierarchies, group dynamics, and individual abilities. First, our work reveals a novel determinant of functional versus dysfunctional status dynamics in groups (Anderson & Willer, 2014; Bendersky & Hays, 2012; Greer et al., 2018; Halevy et al., 2012). Research so far has mainly focused on team-level structures (e.g., how different shapes of hierarchy affect status conflict; Yu et al., 2019) and psychological properties (e.g., how team climate affects status conflict; Antino et al., 2019), leaving the role of the central component of teams—the individuals who compose them—unexplored. By revealing the role that individuals' status acuity plays in driving status conflict, we address this gap and support a conception of conflictual status dynamics as partly rooted in teams' failure to commensurate their members' status with the value they provide to the group (Anderson et al., 2012), which stems not just from individuals' desire for status (Bendersky & Hays, 2012; Kilduff et al., 2016), but also from their inaccurate perceptions. This in turn suggests possible avenues for reducing status conflict, such as more open discussion of team members' relevant skills and experiences. Relatedly, we contribute to the ongoing conversation around the subjective and perceptual aspects of status hierarchies. Building on prior work that has revealed variance in how accurately individuals perceive their own (Anderson et al., 2006) and their groupmates' (Yu & Kilduff, 2020) status within one group that they belong to, we provide evidence that status accuracy reflects an individual ability: Individuals reliably vary in their ability to discern the status hierarchies of groups from observation of these groups. Thus, the same individuals will tend to have a social perceptual advantage across group contexts; indeed, we provide additional evidence for the individual-level benefits of status accuracy in the form of improved work performance and positive relations with coworkers. By creating a measure that is easily administered, we open the door to further research on other effects of status acuity and possible training designed to improve it.

Second, our work contributes to the emerging literature on how individuals' social perceptual abilities influence group outcomes. Research in this area has predominantly focused on emotional intelligence or theory of mind (Day & Carroll, 2004; Engel et al., 2014; Woolley et al., 2010), assessed via the interpretation of the facial expressions of other individuals, one at a time. We extend this by examining accuracy in perceptions of group interactions, expanding the notion of "social perceptiveness," and thereby potentially revealing a new determinant of groups' collective intelligence (Woolley et al., 2015). We also contribute to a small but growing body of work on the perception of groups, which shows that people appear to have certain group-level perceptual abilities that extend beyond just the aggregation of perceptions of individuals, enabling rapid assessments of things like groups' movements and average emotions (see Alt & Phillips, 2021 for a review).

Finally, our research deepens current understanding of human abilities. Humans are a fundamentally social species, and the ability to navigate and work effectively in groups is critical to survival and reproductive success. However, research on human ability and intelligence to date has predominantly centered on nonsocial contexts or solely dyadic interactions. Although various individual personality traits such as conscientiousness and agreeableness have been shown to contribute to group success (e.g., Barrick et al., 1998), our work is among the first to examine an individual ability dimension that is exclusively focused on group interactions. Given the increasingly team-based nature of modern work, existing frameworks of intelligence may need updating, and future studies of the long-term consequences of various mental abilities (e.g., Lang & Kell, 2020) could consider including status acuity.

Limitations and Future Directions

This work represents an initial investigation into status acuity, and as such, has limitations that raise many open questions that could form the basis for future research. First, the current data did not allow us to fully investigate how individuals' status acuity drives groups' status conflict. We chose to focus on the outcome of group performance, with group-level status conflict as the intervening mechanism, to illustrate the importance of status acuity and extend existing work at the individual level. However, future work could more fully test our theorized reasons for how and why status acuity drives status conflict. These could include the following: (a) testing whether status acuity increases individuals' weighting of deep-level status cues (intelligence, motivation) over surface-level cues (race, gender), (b) measuring specific behaviors and dyadic interactions such as interruptions and deferrals, and possibly even nonverbal behaviors like eye contact and facial expressions, (c) measuring status conflict over time with a focus on the initial hierarchy formation process and periods in which new task demands are introduced, and (d) combining these into more sophisticated multilevel models. Doing so would allow us to shine light into the "black box" that can characterize the compositional approach we took in aggregating individual characteristics to the group level.

Related to the first of these—whether high-status-acuity individuals place greater weight on deep versus surface-level status cues—future work could examine whether status acuity might help groups to overcome status-conferral biases related to demographics. In our groups, we did not find a significant interaction between groups' average status acuity and the focal person's gender in predicting the person's attained status ($b = 1.05$, $p = .22$). Thus, groups with more acute members did not weight gender differently. However, we also did not find any overall correlation between gender (1 = female, 0 = male) and attained status (Study 2: $r = -.07$, *n.s.*; Study 3: $r = -.08$, *n.s.*), suggesting that our participants, in general, did not rely on gender in their status conferrals. These dynamics could be different in different populations where biases might be more present, including some workplace teams. We should also note that the measure of status acuity we developed here relies on gender-homogenous groups, which limited our ability to examine individual variation in weighting of gender as a status cue. To address this, we recently created a second measure of status acuity that includes gender heterogeneous groups, and which shows high reliability ($\alpha = .71$) and correlation with our original measure ($r = .74$, $p < .001$). Future work could expand the test to samples of groups from other nations (e.g., China, Korea, Spain, France), to test the cross-national validity of the measure.

Second, future research should explore potential moderators and boundary conditions of the group-level consequences of status acuity. Our group studies involved temporary student groups in a laboratory setting, and the effects of status acuity might be less pronounced in longstanding groups in which the status hierarchy is

formed and largely unchanging. Groups that have already gone through the hierarchy formation process and do not need to reshuffle or renegotiate their hierarchy due to novel task demands may be at less risk for status conflict and may thus benefit less from status acuity. The same might be true of groups with more formal, clearly visible status hierarchies; in general, status acuity may be more important in groups with flat or frequently changing hierarchies, such as in research and development (R&D) or high-tech firms. Relatedly, our groups were relatively small-sized. Future research could examine the effects of status acuity in larger groups that also provide for a more thorough examination of additional compositional models.

Further, the consequences of status acuity might depend on the nature of the group task. Groups engage in many types of tasks, and with only two group studies, we were unable to examine many of these. Notably, while we found a robust significant effect of average status acuity on status conflict, the effect of group status acuity on performance was less consistent. We observed a significant direct effect of status acuity on performance for groups performing a more open-ended, creative idea-generation task (Study 2; without controls: $b = 22.53$, $p = .038$; with controls: $b = 23.93$, $p = .02$), but not for groups performing a more rote decision-making task (Study 3; without controls: $b = 11.47$, $p = .18$; with controls: $b = 14.17$, $p = .09$; there were significant indirect effects of status acuity on performance, via status conflict). One possible explanation of these differences could be that the idea-generation task was more engaging because the topic—generating ideas for improving the school's career center—was more personally relevant, thus making for livelier discussions. It is also possible that teams in Study 2 faced more time pressure than in Study 3, thus exacerbating any delays caused by status misperceptions and status conflict, as they were required to generate ideas and write them down, rather than just produce a set of rankings. Future research could examine these possibilities directly. Further, one immediate and concrete possibility for follow-up research would be to examine how groups' average and minimum levels of status acuity drive performance on established measures of collective intelligence, which include a set of tasks specifically chosen to cover a wide range of groups' tasks (Riedl et al., 2021).

A third important direction for future work is to investigate the antecedents or determinants of status acuity, which could enable future training or intervention programs focused on elevating people's status acuity. Antecedents could include the cues that individuals use to discern relative status and how they weigh those cues, which could be driven by individuals' inherited abilities, and life experiences. Important cues to status could include speaking time, vocal tone and volume, gestures and posture, attention, from others, and interruptions and deferrals. Some of these may be more valid cues to status than others, and individuals with different levels of status acuity might weigh these cues differently. Then, to shed light on the extent to which status acuity is heritable and fixed, versus improvable, researchers could conduct twin studies of status acuity and/or examine the impact of certain life experiences on status acuity. For example, individuals with experience working in a hierarchical environment might be better at discerning status differences. It is also possible that there might exist important cultural differences. For instance, cultures high in power distance, which emphasize the importance of hierarchy (Hofstede, 2011), might foster greater status acuity. Interestingly, recent work has found that Korean and Chinese participants are better at perceiving the average emotions of groups (from rapid snapshots of faces) than Americans of non-East Asian ethnicity (Im et al., 2017; Yang et al., 2019).

Fourth, although the current research focuses on the positive group outcomes of status acuity, future work would benefit from considering any downsides of status acuity. For example, the ability to accurately perceive status hierarchies could perhaps lead individuals to be less likely to challenge the status quo or speak up against high-status others, which could be problematic if high-status others are making incorrect decisions or engaging in wrongdoing. Or, status acuity might help individuals who possess high desire for status to climb the status hierarchy, to the detriment of their groups.

Finally, future research could investigate the existence of a broader "status intelligence." We conceptualized and operationalized status acuity as the ability to accurately perceive informal status hierarchies, as an analog to the emotion recognition dimension of emotional intelligence. However, emotional intelligence encompasses multiple facets, including understanding and managing one's own and others' emotions; similarly, status acuity might represent one facet of a broader set of interrelated abilities, including accurate perception of the relative importance of different individual characteristics to status conferral across different groups (Anderson et al., 2001; Anderson, Spataro, et al., 2008) and understanding of how to effectively convey one's value to a group, for instance. Status acuity might also represent part of a broader category of "group-focused" intelligence, which could include the ability to accurately perceive other group-level phenomena, such as group conflict. Existing work on group perception demonstrates people's above chance perceptions of various group characteristics from snapshots, such as average emotion, diversity and degree of hierarchy; however, individual variation in accuracy has not been examined (Alt & Phillips, 2021; Phillips et al., 2018).[20]

Practical Implications

The present research suggests some important implications for managers aiming to maximize the effectiveness of working groups. Although espousing the importance of "emotional quotient (EQ) in addition to IQ" has become trendy, our research provides managers and organizations more insight and clarity into a specific dimension of the nebulous umbrella of "social skills." Status acuity may be especially important in the modern workplace, given the prevalence of "self-managed groups" without formal hierarchies (Gerpott et al., 2019), and the fact that modern workers frequently change jobs or workgroups, and face shifting task demands. Therefore, when assembling new groups or reallocating personnel, managers might benefit from some knowledge and consideration of their employees' status acuity. Assigning low-status-acuity individuals to a group task that is prone to status conflict, perhaps because of its uncertain and fluctuating nature, could present serious problems. Perhaps even more importantly, if future work can build upon this initial investigation by developing training solutions designed to improve individuals' status acuity, substantial practical benefits could ensue. In the meantime, even just greater awareness of the benefits of paying close attention to individual group members' competencies and experiences, as

[20] Hierarchy here refers to variance across faces in terms of their dominance.

well as to the downsides of status conflict, could help groups perform better.

It is also important to consider whether the dynamics revealed by this research might disadvantage certain group members, and if so, how to mitigate this disadvantage. For example, individuals from minority cultural or functional backgrounds might hold different beliefs about valued status cues than majority members, and thus suffer from lower status acuity. An in-group advantage might also exist for perceiving cues such as confidence and deference, similar to the in-group advantage for emotion recognition (Elfenbein & Ambady, 2002). These could represent novel obstacles to the success of minority members and would underscore the importance of developing training programs designed to improve status acuity.

Conclusion

Status dynamics are ubiquitous in human interactions and are a vital determinant of group and individual outcomes, and so it stands to reason that the ability to accurately perceive status will carry important consequences. We propose and find that status acuity reflects an individual ability that, when aggregated to the group level, helps groups avoid status conflict, thereby facilitating higher group performance. We hope this work sets the stage for a new program of research based on this novel ability factor that is rooted in perceptions of group dynamics.

References

Adams, S. J., Roch, S. G., & Ayman, R. (2005). Communication medium and member familiarity. *Small Group Research*, *36*(3), 321–353. https://doi.org/10.1177/1046496405275232

Aime, F., Humphrey, S., DeRue, D. S., & Paul, J. B. (2014). The riddle of heterarchy: Power transistions in cross-functional teams. *Academy of Management Journal*, *57*(2), 327–352. https://doi.org/10.5465/amj.2011.0756

Alt, N. P., & Phillips, L. T. (2021). Person perception, meet people perception: Exploring the social vision of groups. *Perspectives On Psychological Science*. Advance online publication. https://doi.org/10.1177/17456916211017858

Ambady, N., Bernieri, F. J., & Richeson, J. A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioral stream. *Advances in Experimental Social Psychology*, *32*, 201–271. https://doi.org/10.1016/S0065-2601(00)80006-4

Anderson, C., Ames, D. R., & Gosling, S. D. (2008). Punishing hubris: The perils of overestimating one's status in a group. *Personality and Social Psychology Bulletin*, *34*(1), 90–101. https://doi.org/10.1177/0146167207307489

Anderson, C., John, O. P., Keltner, D., & Kring, A. M. (2001). Who attains social status? Effects of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology*, *81*(1), 116–132. https://doi.org/10.1037/0022-3514.81.1.116

Anderson, C., & Kilduff, G. J. (2009a). The pursuit of status in social groups. *Current Directions in Psychological Science*, *18*(5), 295–298. https://doi.org/10.1111/j.1467-8721.2009.01655.x

Anderson, C., & Kilduff, G. J. (2009b). 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*(2), 491–503. https://doi.org/10.1037/a0014201

Anderson, C., Spataro, S. E., & Flynn, F. J. (2008). Personality and organizational culture as determinants of influence. *Journal of Applied Psychology*, *93*(3), 702–710. https://doi.org/10.1037/0021-9010.93.3.702

Anderson, C., Srivastava, S., Beer, J. S., Spataro, S. E., & Chatman, J. A. (2006). Knowing your place: Self-perceptions of status in face-to-face groups. *Journal of Personality and Social Psychology*, *91*(6), 1094–1110. https://doi.org/10.1037/0022-3514.91.6.1094

Anderson, C., & Willer, R. (2014). Do status hierarchies benefit groups? A bounded functionalist account of status. In *The psychology of social status* (pp. 47–70). Springer. https://doi.org/10.1007/978-1-4939-0867-7_3

Anderson, C., Willer, R., Kilduff, G. J., & Brown, C. E. (2012). The origins of deference: When do people prefer lower status? *Journal of Personality and Social Psychology*, *102*(5), 1077–1088. https://doi.org/10.1037/a0027409

Antino, M., Rico, R., & Thatcher, S. M. B. (2019). Structuring reality through the faultlines lens: The effects of structure, fairness, and status conflict on the activated faultlines–performance relationship. *Academy of Management Journal*, *62*(5), 1444–1470. https://doi.org/10.5465/amj.2017.0054

Arthur, W., Jr., & Day, D. V. (1994). Development of a short form for the raven advanced progressive matrices test. *Educational and Psychological Measurement*, *54*(3), 394–403. https://doi.org/10.1177/0013164494054002013

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "reading the mind in the eyes" Test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *42*(2), 241–251. https://doi.org/10.1111/1469-7610.00715

Barrick, M. R., Neubert, M. J., Mount, M. K., & Stewart, G. L. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, *83*(3), 377–391. https://doi.org/10.1037/0021-9010.83.3.377

Bastian, V. A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences*, *39*(6), 1135–1145. https://doi.org/10.1016/j.paid.2005.04.006

Baugh, S. G., & Graen, G. B. (1997). Effects of team gender and racial composition on perceptions of team performance in cross-functional teams. *Group and Organization Management*, *22*(3), 366–383. https://doi.org/10.1177/1059601197223004

Baysinger, M. A., Scherer, K. T., & LeBreton, J. M. (2014). Exploring the disruptive effects of psychopathy and aggression on group processes and group effectiveness. *Journal of Applied Psychology*, *99*(1), 48–65. https://doi.org/10.1037/a0034317

Bell, S. T. (2007). Deep-level composition variables as predictors of team performance: A meta-analysis. *Journal of Applied Psychology*, *92*(3), 595–615. https://doi.org/10.1037/0021-9010.92.3.595

Bell, S. T., Brown, S. G., Colaneri, A., & Outland, N. (2018). Team composition and the ABCs of teamwork. *American Psychologist*, *73*(4), 349–362. https://doi.org/10.1037/amp0000305

Bendersky, C., & Hays, N. A. (2012). Status conflict in groups. *Organization Science*, *23*(2), 323–340. https://doi.org/10.1287/orsc.1110.0734

Bendersky, C., & Pai, J. (2018). Status dynamics. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*, 183–199. https://doi.org/10.1146/annurev-orgpsych-032117-104602

Berger, J., Cohen, B., & Zelditch, M. (1972). Status Characteristics and Social Interaction. *American Sociological Review*, *37*(3), 241–255. https://doi.org/10.2307/2093465

Berger, J., Rosenholtz, S. J., & Zelditch, M., Jr. (1980). Status organizing processes. *Annual Review of Sociology*, *6*(1), 479–508. https://doi.org/10.1146/annurev.so.06.080180.002403

Biemann, T., Cole, M. S., & Voelpel, S. (2012). Within-Group agreement: On the use (and misuse) of rWG and rWG (J) in leadership research and some best practice guidelines. *The Leadership Quarterly*, *23*(1), 66–80. https://doi.org/10.1016/j.leaqua.2011.11.006

Blackman, M. C., & Funder, D. C. (1998). The effect of information on consensus and accuracy in personality judgment. *Journal of Experimental Social Psychology*, *34*(2), 164–181. https://doi.org/10.1006/jesp.1997.1347

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). Jossey-Bass.

Bliese, P. D., & Wang, M. (2020). Results provide information about cumulative probabilities of finding significance: Let's report this information. *Journal of Management*, *46*(7), 1275–1288.

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health*, *6*, Article 149. https://doi.org/10.3389/fpubh.2018.00149

Brands, R. A. (2013). Cognitive social structures in social network research: A review. *Journal of Organizational Behavior*, *34*(1), 82–103. https://doi.org/10.1002/job.1890

Brannick, M. T., Wahi, M. M., & Goldin, S. B. (2011). Psychometrics of mayer-salovey-caruso emotional intelligence test (MSCEIT) scores. *Psychological Reports*, *109*(1), 327–337. https://doi.org/10.2466/03.04.PR0.109.4.327-337

Brashears, M. E., Hoagland, E., & Quintane, E. (2016). Sex and network recall accuracy. *Social Networks*, *44*, 74–84. https://doi.org/10.1016/j.socnet.2015.06.002

Brody, N. (2004). What cognitive intelligence is and what emotional intelligence is not. *Psychological Inquiry*, *15*(3), 234–238. https://doi.org/10.2307/20447233

Brown, R. D., & Hauenstein, N. M. A. (2005). Interrater agreement reconsidered: An Alternative to the r_{wg} Indices. *Organizational Research Methods*, *8*(2), 165–184. https://doi.org/10.1177/1094428105275376

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3–5. https://doi.org/10.1177/1745691610393980

Bunderson, J. S. (2003). Recognizing and utilizing expertise in work groups: A status characteristics perspective. *Administrative Science Quarterly*, *48*(4), 557–591. https://doi.org/10.2307/3556637

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105. https://doi.org/10.1037/h0046016

Caruso, D. R., Mayer, J. D., & Salovey, P. (2002). Relation of an ability measure of emotional intelligence to personality. *Journal of Personality Assessment*, *79*(2), 306–320. https://doi.org/10.1207/S15327752JPA7902_12

Casciaro, T. (1998). Seeing things clearly: Social structure, personality, and accuracy in social network perception. *Social Networks*, *20*(4), 331–351. https://doi.org/10.1016/S0378-8733(98)00008-2

Cattell, R. B. (1943). The measurement of adult intelligence. *Psychological Bulletin*, *40*(3), 153–193. https://doi.org/10.1037/h0059973

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, *83*(2), 234–246. https://doi.org/10.1037/0021-9010.83.2.234

Cheng, C. Y., Chua, R. Y. J., Morris, M. W., & Lee, L. (2012). Finding the right mix: How the composition of self-managing multicultural teams' cultural value orientation influences performance over time. *Journal of Organizational Behavior*, *33*(3), 389–411. https://doi.org/10.1002/job.1777

Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior*, *31*(5), 334–347.

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the top: Evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of Personality and Social Psychology*, *104*(1), 103–125. https://doi.org/10.1037/a0030398

Cheng, J. T., Tracy, J. L., Ho, S., & Henrich, J. (2016). Listen, follow me: Dynamic vocal signals of dominance predict emergent social rank in humans. *Journal of Experimental Psychology: General*, *145*(5), 536–547. https://doi.org/10.1037/xge0000166

Chiao, J. Y. (2010). Neural basis of social status hierarchy across species. *Current Opinion in Neurobiology*, *20*(6), 803–809.

Chiao, J. Y., Adams Jr, R. B., Tse, P. U., Lowenthal, W. T., Richeson, J. A., & Ambady, N. (2008). Knowing who's boss: fMRI and ERP investigations of social dominance perception. *Group Processes & Intergroup Relations*, *11*(2), 201–214.

Chiu, C. C., Owens, B. P., & Tesluk, P. E. (2016). Initiating and utilizing shared leadership in teams: The role of leader humility, team proactive personality, and team performance capability. *Journal of Applied Psychology*, *101*, 1705–1720. https://doi.org/10.1037/apl0000159

Chizhik, A. W., Alexander, M. G., Chizhik, E. W., & Goodman, J. A. (2003). The rise and fall of power and prestige orders: Influence of task structure. *Social Psychology Quarterly*, *66*(3), 303–317. https://doi.org/10.2307/1519828

Comrey, A. L. (1988). Factor-analytic methods of scale development in personality and clinical psychology. *Journal of Consulting and Clinical Psychology*, *56*(5), 754–761. https://doi.org/10.1037/0022-006X.56.5.754

Côté, S., & Miners, C. T. H. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly*, *51*(1), 1–28. https://doi.org/10.2189/asqu.51.1.1

Courtright, S. H., McCormick, B. W., Mistry, S., & Wang, J. (2017). Quality charters or quality members? A control theory perspective on team charters and team performance. *Journal of Applied Psychology*, *102*(10), 1462–1470. https://doi.org/10.1037/apl0000229

Crawford, E. R., & Lepine, J. A. (2013). A configural theory of team processes: Accounting for the structure of taskwork and teamwork. *Academy of Management Review*, *38*(1), 32–48. https://doi.org/10.5465/amr.2011.0206

Day, A. L., & Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual Differences*, *36*(6), 1443–1458. https://doi.org/10.1016/S0191-8869(03)00240-X

De Soto, C. B. (1960). Learning a social structure. *Journal of Abnormal and Social Psychology*, *60*(3), 417–421. https://doi.org/10.1037/h0047511

Dierdorff, E. C., & Fisher, D. M. (2021). Problematic personalities in teams: Implications for performance trajectories and resilience to unexpected change. *Personnel Psychology*, *207*, 1–29. https://doi.org/10.1111/peps.12481

Dietz, B., van Knippenberg, D., Hirst, G., & Restubog, S. L. D. (2015). Outperforming whom? A multilevel study of performance-prove goal orientation, performance, and the moderating role of shared team identification. *Journal of Applied Psychology*, *100*(6), 1811–1824. https://doi.org/10.1037/a0038888

Dietze, P., & Knowles, E. D. (2021). Social class predicts emotion perception and perspective-taking performance in adults. *Personality and Social Psychology Bulletin*, *47*(1), 42–56. https://doi.org/10.1177/0146167220914116

Dong, Y., Liao, H., Chuang, A., Zhou, J., & Campbell, E. M. (2015). Fostering employee service creativity: Joint effects of customer empowering behaviors and supervisory empowering leadership. *Journal of Applied Psychology*, *100*(5), 1364–1380. https://doi.org/10.1037/a0038969

Druskat, V. U., & Wolff, S. B. (2001). Group emotional intelligence and its influence on group effectiveness. In C. Cherniss & D. Goleman (Eds.), *The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups and organizations* (pp. 132–155). Jossey-Bass.

Duffy, M. K., & Lee, K. Y. (2012). Negative interpersonal exchanges in teams. In L. T. Eby & T. D. Allen (Eds.), *Personal relationships: The effect on employee attitudes, behavior, and well-being* (pp. 195–220). Routledge.

Dunbar, R. I., & Shultz, S. (2007). Evolution in the social brain. *Science*, *317*(5843), 1344–1347.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, *44*(2), 350–383. https://doi.org/10.2307/2666999

Elfenbein, H. A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A meta-analysis. *Psychological Bulletin*, *128*(2), 203–235. https://doi.org/10.1037/0033-2909.128.2.203

Ellis, A. P. J., Hollenbeck, J. R., Ilgen, D. R., Porter, C. O. L. H., West, B. J., & Moon, H. (2003). Team learning: Collectively connecting the dots. *Journal of Applied Psychology*, *88*(5), 821–835. https://doi.org/10.1037/0021-9010.88.5.821

Emich, K. J., Lu, L., Ferguson, A., Peterson, R. S., & McCourt, M. (2021). Team composition revisited: A team member attribute alignment approach. *Organizational Research Methods*, *31*(7), Article 10944 2812110423. https://doi.org/10.1177/10944281211042388

Engel, D., Woolley, A. W., Jing, L. X., Chabris, C. F., & Malone, T. W. (2014). Reading the mind in the eyes or reading between the lines? Theory of Mind predicts collective intelligence equally well online and face-to-face. *PLOS ONE*, *9*(12), Article e115212. https://doi.org/10.1371/journal.pone.0115212

Felps, W., Mitchell, T. R., & Byington, E. (2006). How, when, and why bad apples spoil the barrel: Negative group members and dysfunctional groups. *Research in Organizational Behavior*, *27*, 175–222. https://doi.org/10.1016/S0191-3085(06)27005-9

Fernández-Abascal, E. G., Cabello, R., Fernández-Berrocal, P., & Baron-Cohen, S. (2013). Test-retest reliability of the 'Reading the Mind in the Eyes' test: A one-year follow-up study. *Molecular Autism*, *4*(1), 33. https://doi.org/10.1186/2040-2392-4-33

Flynn, F. J., Reagans, R. E., Amanatullah, E. T., & Ames, D. R. (2006). Helping one's way to the top: Self-monitors achieve status by helping others and knowing who helps whom. *Journal of Personality and Social Psychology*, *91*(6), 1123–1137. https://doi.org/10.1037/0022-3514.91.6.1123

Freeman, L. C., & Romney, A. K. (1987). Words, deeds and social structure: A preliminary study of the reliability of informants. *Human Organization*, *46*(4), 330–334. https://doi.org/10.17730/humo.46.4.u122402864140315

Freeman, L. C., Romney, A. K., & Freeman, S. C. (1987). Cognitive structure and informant accuracy. *American Anthropologist*, *89*(2), 310–325. https://doi.org/10.1525/aa.1987.89.2.02a00020

Funder, D. C., & West, S. G. (1993). Consensus, self-other agreement, and accuracy in personality judgment: An introduction. *Journal of Personality*, *61*(4), 457–476. https://doi.org/10.1111/j.1467-6494.1993.tb00778.x

Furnham, A., Monsen, J., & Ahmetoglu, G. (2009). Typical intellectual engagement, Big Five personality traits, approaches to learning and cognitive ability predictors of academic performance. *The British Journal of Educational Psychology*, *79*(Pt. 4), 769–782. https://doi.org/10.1348/978185409X412147

Gardner, H., & Hatch, T. (1989). Educational implications of the theory of multiple intelligences. *Educational Researcher*, *18*(8), 4–10. https://doi.org/10.3102/0013189X018008004

Gerpott, F. H., Lehmann-Willenbrock, N., Voelpel, S. C., & van Vugt, M. (2019). It's not just what is said, but when it's said: A temporal account of verbal behaviors and emergent leadership in self-managed teams. *Academy of Management Journal*, *62*(3), 717–738. https://doi.org/10.5465/amj.2017.0149

Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, *10*(3), 601–616.

Gong, Y., Law, K. S., Chang, S., & Xin, K. R. (2009). Human resources management and firm performance: The differential role of managerial affective and continuance commitment. *Journal of Applied Psychology*, *94*(1), 263–275. https://doi.org/10.1037/a0013116

Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of mechanical turk samples. *Journal of Behavioral Decision Making*, *26*(3), 213–224. https://doi.org/10.1002/bdm.1753

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, *37*(6), 504–528. https://doi.org/10.1016/S0092-6566(03)00046-1

Greer, L. L., de Jong, B. A., Schouten, M. E., & Dannals, J. E. (2018). Why and when hierarchy impacts team effectiveness: A meta-analytic integration. *Journal of Applied Psychology*, *103*(6), 591–613. https://doi.org/10.1037/apl0000291

Greer, L. L., & van Kleef, G. A. (2010). Equality versus differentiation: The effects of power dispersion on group interaction. *Journal of Applied Psychology*, *95*(6), 1032–1044. https://doi.org/10.1037/a0020373

Grijalva, E., Maynes, T. D., Badura, K. L., & Whiting, S. W. (2020). Examining the "I" in team: A longitudinal investigation of the influence of team narcissism composition on team outcomes in the NBA. *Academy of Management Journal*, *63*(1), 7–33. https://doi.org/10.5465/amj.2017.0218

Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, *103*(2), 265–275. https://doi.org/10.1037/0033-2909.103.2.265

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Prentice Hall.

Halevy, N., Chou, E. Y., Galinsky, A. D., & Murnighan, J. K. (2012). When hierarchy wins. *Social Psychological and Personality Science*, *3*(4), 398–406. https://doi.org/10.1177/1948550611424225

Halfhill, T., Nielsen, T. M., Sundstrom, E., & Weilbaecher, A. (2009). Group personality composition and performance in military service teams. *Military Psychology*, *17*(1), 41–54. https://doi.org/10.1207/S15327876MP1701_4

Hall, A. R., & Coyne, C. J. (2014). The political economy of drones. *Defence and Peace Economics*, *25*(5), 445–460. https://doi.org/10.1080/10242694.2013.833369

Hall, J. A., Coats, E. J., & LeBeau, L. S. (2005). Nonverbal behavior and the vertical dimension of social relations: A meta-analysis. *Psychological Bulletin*, *131*(6), 898–924. https://doi.org/10.1037/0033-2909.131.6.898

Hall, J. A., Mast, M. S., & West, T. V. (2016). Accurate interpersonal perception: Many traditions, one topic. In *The social psychology of perceiving others accurately* (pp. 3–22). Cambridge University Press. https://doi.org/10.1017/CBO9781316181959.001

Hays, N. A., & Bendersky, C. (2015). Not all inequality is created equal: Effects of status versus power hierarchies on competition for upward mobility. *Journal of Personality and Social Psychology*, *108*(6), 867–882. https://doi.org/10.1037/pspi0000017

Heidemeier, H., & Moser, K. (2009). Self-other agreement in job performance ratings: A meta-analytic test of a process model. *Journal of Applied Psychology*, *94*(2), 353–370. https://doi.org/10.1037/0021-9010.94.2.353

Henrich, J., & Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, *22*(3), 165–196. https://doi.org/10.1016/S1090-5138(00)00071-4

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, *21*(5), 967–988. https://doi.org/10.1177/014920639502100509

Hinkin, T. R. (1998). A brief tutorial on the Development of Measures for Use in Survey Questionnaires. *Organizational Research Methods*, *1*(1), 104–121. https://doi.org/10.1177/109442819800100106

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, *2*(1), 2307–0919. https://doi.org/10.9707/2307-0919.1014

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 intragroup differences, and performance of diverse work groups. *Academy of Management Journal*, *51*(6), 1204–1222. https://doi.org/10.5465/amj.2008.35732995

Hunt, E. B. (2010). *Human intelligence*. Cambridge University Press. https://doi.org/10.1017/CBO9780511781308

James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, *67*(2), 219–229. https://doi.org/10.1037/0021-9010.67.2.219

Im, H. Y., Chong, S. C., Sun, J., Steiner, T. G., Albohn, D. N., Adams, R. B., & Kveraga, K. (2017). Cross-Cultural and hemispheric laterality effects on the ensemble coding of emotion in facial crowds. *Culture and Brain*, *5*(2), 125–152.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology*, *69*(1), 85–98. https://doi.org/10.1037/0021-9010.69.1.85

Janicik, G. A., & Larrick, R. P. (2005). Social network schemas and the learning of incomplete networks. *Journal of Personality and Social Psychology*, *88*(2), 348–364. https://doi.org/10.1037/0022-3514.88.2.348

Jehn, K., Rispens, S., Jonsen, K., & Greer, L. (2013). Conflict contagion: A temporal perspective on the development of conflict within teams. *International Journal of Conflict Management*, *24*(4), 352–373. https://doi.org/10.1108/IJCMA-05-2011-0039

Jordan, P. J., & Troth, A. C. (2009). Managing emotions during team problem solving: Emotional intelligence and conflict resolution. *Human Performance*, *17*(2), 195–218. https://doi.org/10.1207/S15327043HUP1702_4

Kenny, D. A. (1995). The effect of nonindependence on significance testing in dyadic research. *Personal Relationships*, *2*(1), 67–75. https://doi.org/10.1111/j.1475-6811.1995.tb00078.x

Khorashad, B. S., Baron-Cohen, S., Roshan, G. M., Kazemian, M., Khazai, L., Aghili, Z., Talaei, A., & Afkhamizadeh, M. (2015). The "reading the mind in the eyes" test: Investigation of psychometric properties and test-retest reliability of the Persian version. *Journal of Autism and Developmental Disorders*, *45*(9), 2651–2666. https://doi.org/10.1007/s10803-015-2427-4

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*(5), 816–831. https://doi.org/10.1037/a0033667

Kilduff, G. J., Willer, R., & Anderson, C. (2016). Hierarchy and its discontents: Status disagreement leads to withdrawal of contribution and lower group performance. *Organization Science*, *27*(2), 373–390. https://doi.org/10.1287/orsc.2016.1058

Kline, T. J. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage Publications.

Koski, J. E., Xie, H., & Olson, I. R. (2015). Understanding social hierarchies: The neural and psychological foundations of status perception. *Social Neuroscience*, *10*(5), 527–550.

Kozlowski, S. W., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). Jossey-Bass.

Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power in organizations. *Administrative Science Quarterly*, *35*(2), 342–369. https://doi.org/10.2307/2393394

Lang, J. W. B., & Kell, H. J. (2020). General mental ability and specific abilities: Their relative importance for extrinsic career success. *Journal of Applied Psychology*, *105*(9), 1047–1061. https://doi.org/10.1037/apl0000472

LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, *11*(4), 815–852.

Lee, H. W., Choi, J. N., & Kim, S. (2018). Does gender diversity help teams constructively manage status conflict? An evolutionary perspective of status conflict, team psychological safety, and team creativity. *Organizational Behavior and Human Decision Processes*, *144*, 187–199. https://doi.org/10.1016/j.obhdp.2017.09.005

Leggat, F. J., Smith, M. J., & Figgins, S. G. (2019). Talented but disruptive: An exploration of problematic players in sports teams. *Journal of Applied Sport Psychology*, *32*(4), 357–376. https://doi.org/10.1080/10413200.2018.1549621

LePine, J. A. (2003). Team adaptation and postchange performance: Effects of team composition in terms of members' cognitive ability and personality. *Journal of Applied Psychology*, *88*(1), 27–39. https://doi.org/10.1037/0021-9010.88.1.27

LePine, J. A., Buckman, B. R., Crawford, E. R., Methot, J. R., & the LePine. (2011). A review of research on personality in teams: Accounting for pathways spanning levels of theory and analysis. *Human Resource Management Review*, *21*(4), 311–330. https://doi.org/10.1016/j.hrmr.2010.10.004

Levesque, M. J., & Kenny, D. A. (1993). Accuracy of behavioral predictions at zero acquaintance: A social relations analysis. *Journal of Personality and Social Psychology*, *65*(6), 1178–1187. https://doi.org/10.1037/0022-3514.65.6.1178

Littlepage, G., Robison, W., & Reddington, K. (1997). Effects of task experience and group experience on group performance, member ability, and recognition of expertise. *Organizational Behavior and Human Decision Processes*, *69*(2), 133–147. https://doi.org/10.1006/obhd.1997.2677

London, M., & Wohlers, A. J. (1991). Agreement between subordinate and self-ratings in upward feedback. *Personnel Psychology*, *44*(2), 375–390. https://doi.org/10.1111/j.1744-6570.1991.tb00964.x

MacCann, C., & Roberts, R. D. (2008). New paradigms for assessing emotional intelligence: Theory and data. *Emotion*, *8*(4), 540–551. https://doi.org/10.1037/a0012746

Magee, J. C. (2009). Seeing power in action: The roles of deliberation, implementation, and action in inferences of power. *Journal of Experimental Social Psychology*, *45*(1), 1–14. https://doi.org/10.1016/j.jesp.2008.06.010

Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *The Academy of Management Annals*, *2*(1), 351–398. https://doi.org/10.5465/19416520802211628

Mannes, A. E., Soll, J. B., & Larrick, R. P. (2014). The wisdom of select crowds. *Journal of Personality and Social Psychology*, *107*(2), 276–299. https://doi.org/10.1037/a0036677

Mar, R. A., Oatley, K., Hirsh, J., Dela Paz, J., & Peterson, J. B. (2006). Bookworms versus nerds: Exposure to fiction versus non-fiction, divergent associations with social ability, and the simulation of fictional social worlds. *Journal of Research in Personality*, *40*(5), 694–712. https://doi.org/10.1016/j.jrp.2005.08.002

Marsh, A. A., Blair, K. S., Jones, M. M., Soliman, N., & Blair, R. J. R. (2009). Dominance and submission: The ventrolateral prefrontal cortex and responses to status cues. *Journal of Cognitive Neuroscience*, *21*(4), 713–724.

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods*, *44*(1), 1–23. https://doi.org/10.3758/s13428-011-0124-6

Mast, M. S., & Hall, J. A. (2004). Who is the boss and who is not? Accuracy of judging status. *Journal of Nonverbal Behavior*, *28*(3), 145–165. https://doi.org/10.1023/B:JONB.0000039647.94190.21

Mathieu, J. E., Tannenbaum, S. I., Donsbach, J. S., & Alliger, G. M. (2013). A review and integration of team composition models: Moving toward a dynamic and temporal framework. *Journal of Management*, *40*(1), 130–160. https://doi.org/10.1177/0149206313503014

Matthews, D. T., & Lassiter, K. S. (2007). What does the wonderlic personnel test measure? *Psychological Reports*, *100*(3 I), 707–712. https://doi.org/10.2466/PR0.100.3.707-712

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence* (pp. 3–31). Basic Books. https://doi.org/10.1177/1066480710387486

Mayer, J. D., Salovey, P., & Caruso, D. R. (2012). The validity of the MSCEIT: Additional analyses and evidence. *Emotion Review*, *4*(4), 403–408. https://doi.org/10.1177/1754073912445815

Meyer, J., & Shean, G. (2006). Social-Cognitive functioning and schizotypal characteristics. *The Journal of Psychology*, *140*(3), 199–207.

Mueller, J. S. (2012). Why individuals in larger teams perform worse. *Organizational Behavior and Human Decision Processes*, *117*(1), 111–124. https://doi.org/10.1016/j.obhdp.2011.08.004

Murphy, N. A., Hall, J. A., Ruben, M. A., Frauendorfer, D., Schmid Mast, M., Johnson, K. E., & Nguyen, L. (2019). Predictive validity of thin-slice nonverbal behavior from social interactions. *Personality and Social Psychology Bulletin*, *45*(7), 983–993. https://doi.org/10.1177/0146167218802834

Neuman, G. A., & Wright, J. (1999). Team effectiveness: Beyond skills and cognitive ability. *Journal of Applied Psychology*, *84*(3), 376–389. https://doi.org/10.1037/0021-9010.84.3.376

Nowicki, E. A., & Nowicki, E. A. (2006). A cross-sectional multivariate analysis of children's attitudes towards disabilities. *Journal of Intellectual Disability Research*, *50*(Pt. 5), 335–348. https://doi.org/10.1111/j.1365-2788.2005.00781.x

Nowicki, S., & Duke, M. P. (1994). Individual differences in the nonverbal communication of affect: The diagnostic analysis of nonverbal accuracy scale. *Journal of Nonverbal Behavior 1994 18:1*, *18*(1), 9–35. https://doi.org/10.1007/BF02169077

Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill.

Olderbak, S., Wilhelm, O., Olaru, G., Geiger, M., Brenneman, M. W., & Roberts, R. D. (2015). A psychometric analysis of the reading the mind in the eyes test: Toward a brief form for research and applied settings. *Frontiers in Psychology*, *6*(OCT), Article 1503. https://doi.org/10.3389/fpsyg.2015.01503

Palmer, B. R., Gignac, G., Manocha, R., & Stough, C. (2005). A psychometric evaluation of the Mayer-Salovey-Caruso emotional intelligence test version 2.0. *Intelligence*, *33*(3), 285–305. https://doi.org/10.1016/j.intell.2004.11.003

Phillips, L. T., Slepian, M. L., & Hughes, B. L. (2018). Perceiving groups: The people perception of diversity and hierarchy. *Journal of Personality and Social Psychology*, *114*(5), 766–785. https://doi.org/10.1037/pspi0000120

Pinkham, A. E., Penn, D. L., Green, M. F., Buck, B., Healey, K., & Harvey, P. D. (2014). The social cognition psychometric evaluation study: Results of the expert survey and RAND panel. *Schizophrenia Bulletin*, *40*(4), 813–823. https://doi.org/10.1093/schbul/sbt081

Prewett, M. S., Walvoord, A. A. G., Stilson, F. R. B., Rossi, M. E., & Brannick, M. T. (2009). The team personality–team performance relationship revisited: The impact of criterion choice, pattern of workflow, and method of aggregation. *Human Performance*, *22*(4), 273–296. https://doi.org/10.1080/08959280903120253

Raven, J. (2000). *Manual for Raven's progressive matrices and vocabulary scales* [Research supplement no. 3] (2000 ed.). Oxford Psychologists Press.

R Core Team. (2020). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. https://www.R-project.org/

Ridgeway, C. (1991). The social construction of status value: Gender and other nominal characteristics. *Social Forces*, *70*(2), 367–386. https://doi.org/10.2307/2580244

Ridgeway, C. L. (1987). Nonverbal behavior, dominance, and the basis of status in task groups. *American Sociological Review*, *52*(5), 683–694. https://doi.org/10.2307/2095603

Ridgeway, C. L., & Berger, J. (1986). Expectations, legitimation, and dominance behavior in task groups. *American Sociological Review*, *51*(5), Article 603. https://doi.org/10.2307/2095487

Riedl, C., Kim, Y. J., Gupta, P., Malone, T. W., & Woolley, A. W. (2021). Quantifying collective intelligence in human groups. *Proceedings of the National Academy of Sciences of the United States of America*, *118*(21), Article e2005737118. https://doi.org/10.1073/pnas.2005737118

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*, 1–36. https://doi.org/10.18637/jss.v048.i02

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. J. Wiley & Sons.

Rule, N. O., Ambady, N., Adams, R. B., & Macrae, C. N. (2008). Accuracy and awareness in the perception and categorization of male sexual orientation. *Journal of Personality and Social Psychology*, *95*(5), 1019–1028. https://doi.org/10.1037/a0013194

Sanchez-Burks, J., & Huy, Q. N. (2009). Emotional aperture and strategic change: The accurate recognition of collective emotions. *Organization Science*, *20*(1), 22–34. https://doi.org/10.1287/orsc.1070.0347

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, *7*(2), 147–177. https://doi.org/10.1037/1082-989X.7.2.147

Scheepers, D., & Ellemers, N. (2005). When the pressure is up: The assessment of social identity threat in low and high status groups. *Journal of Experimental Social Psychology*, *41*(2), 192–200. https://doi.org/10.1016/j.jesp.2004.06.002

Schneider, B., White, S. S., & Paul, M. C. (1998). Linking service climate and customer perceptions of service quality: Tests of a causal model. *Journal of Applied Psychology*, *83*(2), 150–163. https://doi.org/10.1037/0021-9010.83.2.150

Schönbrodt, F. D., Back, M. D., & Schmukle, S. C. (2012). TripleR: An R package for social relations analyses based on round-robin designs. *Behavior Research Methods*, *44*(2), 455–470. https://doi.org/10.3758/s13428-011-0150-4

Simpson, B., Willer, R., & Ridgeway, C. L. (2012). Status hierarchies and the organization of collective action. *Sociological Theory*, *30*(3), 149–166. https://doi.org/10.1177/0735275112457912

Sternberg, R. J. (1997). The concept of intelligence and its role in lifelong learning and success. *American Psychologist*, *52*(10), 1030–1037. https://doi.org/10.1037/0003-066X.52.10.1030

Stern, C., West, T. V., & Schoenthaler, A. (2013). The dynamic relationship between accuracy and bias in social perception research. *Social and Personality Psychology Compass*, *7*(5), 303–314. https://doi.org/10.1111/spc3.12024

StataCorp. (2017). *Stata 15 base reference manual*. Stata Press.

Sternberg, R. J., & Smith, C. (1985). Social intelligence and decoding skills in nonverbal communication. *Social Cognition*, *3*(2), 168–192. https://doi.org/10.1521/soco.1985.3.2.168

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). Harper Collins College Publishers.

Townsend, A. M., & Scott, K. D. (2001). Team Racial composition, member attitudes, and performance: A field study. *Industrial Relations*, *40*(2), 317–337. https://doi.org/10.1111/0019-8676.00210

Tso, I. F., Grove, T. B., & Taylor, S. F. (2010). Emotional experience predicts social adjustment independent of neurocognition and social cognition in schizophrenia. *Schizophrenia Research*, *122*(1–3), 156–163. https://doi.org/10.1016/j.schres.2009.12.007

Tziner, A., & Eden, D. (1985). Effects of crew composition on crew performance: Does the whole equal the sum of its parts? *Journal of Applied Psychology*, *70*(1), 85–93. https://doi.org/10.1037/0021-9010.70.1.85

van de Vliert, E., Euwema, M. C., & Huismans, S. E. (1995). Managing conflict with a subordinate or a superior: Effectiveness of conglomerated behavior. *Journal of Applied Psychology*, *80*(2), 271–281. https://doi.org/10.1037/0021-9010.80.2.271

van Knippenberg, D., Haslam, S. A., & Platow, M. J. (2007). Unity through diversity: Value-in-diversity beliefs, work group diversity, and group

identification. *Group Dynamics*, *11*(3), 207–222. https://doi.org/10.1037/1089-2699.11.3.207

van Kreveld, D., & Zajonc, R. B. (1966). The learning of influence structures. *Journal of Personality*, *34*(2), 205–223. https://doi.org/10.1111/j.1467-6494.1966.tb01709.x

Vellante, M., Baron-Cohen, S., Melis, M., Marrone, M., Petretto, D. R., Masala, C., & Preti, A. (2013). The "reading the mind in the eyes" test: Systematic review of psychometric properties and a validation study in Italy. *Cognitive Neuropsychiatry*, *18*(4), 326–354. https://doi.org/10.1080/13546805.2012.721728

Wiley, M. G., & Eskilson, A. (1985). Speech style, gender stereotypes, and corporate success: What if women talk more like men? *Sex Roles*, *12*(9–10), 993–1007. https://doi.org/10.1007/BF00288100

Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Review*, *74*(1), 23–43. https://doi.org/10.1177/000312240907400102

Wonderlic, E. F. (1973). *Wonderlic personnel test: Manual*. Western Psychological Services.

Woolley, A. W. Aggarwal, I., & Malone, T. W. (2015). Collective intelligence and group performance. *Current Directions in Psychological Science*, *24*(6), 420–424. https://doi.org/10.1177/0963721415599543

Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, *330*(6004), 686–688. https://doi.org/10.1126/science.1193147

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, *83*(3), 486–493. https://doi.org/10.1037/0021-9010.83.3.486

Xu, X., Jiang, L., & Wang, H. J. (2019). How to build your team for innovation? A cross-level mediation model of team personality, team climate for innovation, creativity, and job crafting. *Journal of Occupational and Organizational Psychology*, *92*(4), 848–872. https://doi.org/10.1111/joop.12277

Yang, Y., Hong, Y. Y., & Sanchez-Burks, J. (2019). Emotional aperture across east and west: How culture shapes the perception of collective affect. *Journal of Cross-Cultural Psychology*, *50*(6), 751–762.

Yu, S., Greer, L. L., Halevy, N., & van Bunderen, L. (2019). On ladders and pyramids: Hierarchy's shape determines relationships and performance in groups. *Personality and Social Psychology Bulletin*, *45*(12), 1717–1733. https://doi.org/10.1177/0146167219842867

Yu, S., & Kilduff, G. J. (2020). Knowing where others stand: Accuracy and performance effects of individuals' perceived status hierarchies. *Journal of Personality and Social Psychology*, *119*(1), 159–184. https://doi.org/10.1037/pspi0000216

Zhao, E. Y., Thatcher, S. M. B., & Jehn, K. A. (2019). Instigating, engaging in, and managing group conflict: A review of the literature addressing the critical role of the leader in group conflict. *Academy of Management Annals*, *13*(1), 112–147. https://doi.org/10.5465/ANNALS.2016.0153

Zhu, X. S., Wolfson, M. A., Dalal, D. K., & Mathieu, J. E. (2020). Team decision making: The dynamic effects of team decision style composition and performance via decision strategy. *Journal of Management*, *47*(5), 1281–1304. https://doi.org/10.1177/0149206320916232

Zitek, E. M., & Phillips, L. T. (2020). Ease and control: the cognitive benefits of hierarchy. *Current Opinion in Psychology*, *33*, 131–135.

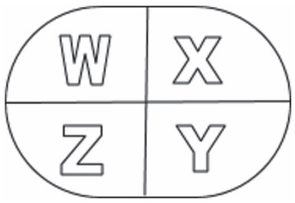
Zitek, E. M., & Tiedens, L. Z. (2012). The fluency of social hierarchy: The ease with which hierarchical relationships are seen, remembered, learned, and liked. *Journal of Personality and Social Psychology*, *102*(1), 98–115. https://doi.org/10.1037/a0025345

Appendix

Sample Status Acuity Test Interface

Please watch this short video clip of a group of students working together. After you finish watching the video, please indicate your perceptions of each member's relative status and influence in this group by answering the questions below.

For reference, the students' seating structure and identifier are shown in the graph below. W is wearing an orange, white, and black striped shirt, Z is wearing a blue checkered shirt, X is wearing a green shirt, Y is wearing a white checkered shirt.



1. How much do you think each person achieved high status and influence in the group? (1 = does not describe this person at all, 4 = describes this person somewhat, 7 = describes this person very well)

_____ W—top left
_____ Z—bottom left
_____ X—top right
_____ Y—bottom right

2. Please rank the members in this group in terms of their relative status and influence, with 1 = highest, 2 = 2nd highest, 3 = 3rd highest, and 4 = lowest.

_____ W—top left
_____ Z—bottom left
_____ X—top right
_____ Y—bottom right

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