

# From whom do we learn group norms? Low-ranking group members are perceived as the best sources

Jennifer E. Dannals<sup>a,\*</sup>, Emily S. Reit<sup>b</sup>, Dale T. Miller<sup>b</sup>

<sup>a</sup> Tuck School of Business at Dartmouth College, United States

<sup>b</sup> Stanford Graduate School of Business, United States

## ARTICLE INFO

### Keywords:

Social norms  
Hierarchical rank  
Advice seeking

## ABSTRACT

Social norm perception is ubiquitous in small groups and teams, but how individuals approach this process is not well understood. When individuals wish to perceive descriptive social norms in a group or team, whose advice and behavior do they prefer to rely on? Four lab studies and one field survey demonstrate that when individuals seek information about a team's social norms they prefer to receive advice from lower-ranking individuals (Studies 1–4) and give greater weight to the observed behavior of lower-ranking individuals (Study 5). Results from correlation (Study 3) and moderation (Study 4) approaches suggest this preference stems from the assumption that lower-ranking team members are more attentive to and aware of the descriptive social norms of their team. Alternative mechanisms (e.g., perceived similarity to lower-ranking team members, greater honesty of lower-ranking team members) were also examined, but no support for these was found.

## 1. Introduction

The descriptive social norms of a social group are the most common (average) behaviors of its members (Bettenhausen & Murnighan, 1985; Cialdini, Reno, & Kallgren, 1990). Individuals may wish to know the descriptive social norm of their group in order to conform to it (Bettenhausen & Murnighan, 1985; Miller & Prentice, 2016; Allcott, 2011; Goldstein, Cialdini, & Griskevicius, 2008; Paluck, Shepherd, & Aronow, 2016), understand the social costs associated with a certain behavior (Fehr & Fischbacher, 2004), make strategic decisions to differentiate themselves from the norm (Halevy, 2016), or evaluate their ability to change or improve the status quo norm (Sunstein, 1996). However, little is known about how individuals arrive at their perception of the descriptive social norm (see Tankard & Paluck, 2016), and in particular, how they integrate and summarize advice about, or observations of, a small group or team's behavior. While previous research suggests that individuals may be adept at summarizing group behavior when the group behaves similarly (Dannals & Miller, 2017), the process can become more complicated when group members differ in their behavior. In this paper we suggest that lay perceptions of hierarchical rank lead people to perceive advice and behavior from low-ranking individuals as more diagnostic of behavioral descriptive social norms within their team than that of high-ranking individuals.

In order to elucidate the context of our investigation, consider the

following example. Sam is a new employee in the marketing team of a small company. Prior to joining and even once she is part of the team, Sam likely will wish to learn information about the team relevant to her daily experience as an employee. In this paper we will consider two categories of topics that Sam might be interested in learning more about while getting acclimated: information about her job role and responsibilities (which we will refer to as job advice) and information about the descriptive social norms of the team, i.e., how most people behave for various behaviors, such as how often people ask for help or disagree with each other, or the hours that people typically work (which we will refer to collectively as norm advice).

It is our contention that whereas people like Sam look for job advice from similarly-ranked or higher-ranked team members, they will prefer norm advice from relatively lower-ranking team members. That is, people like Sam believe they will receive more accurate norm advice from lower-ranking than higher-ranking team members and will also give greater weight to the behavior of lower-ranking than higher-ranking team members in perceiving the team's norm.

We further suggest that the belief that lower-ranking individuals hold more diagnostic views of descriptive norms is held consistently across observers' rank, which is to say that Sam will prefer lower-ranking advice on the social norms of the team *even if she herself is entering the team at a relatively high rank*. Though higher-ranking team members can be expected to search for norm information less often

\* Corresponding author.

E-mail address: [jennifer.e.dannals@tuck.dartmouth.edu](mailto:jennifer.e.dannals@tuck.dartmouth.edu) (J.E. Dannals).

<https://doi.org/10.1016/j.obhdp.2020.08.002>

Received 4 January 2019; Received in revised form 8 August 2020; Accepted 10 August 2020

Available online 29 August 2020

0749-5978/ © 2020 Elsevier Inc. All rights reserved.

(Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008), we argue that when they do they will look to lower-ranking team members for the most accurate advice on the descriptive social norm. We aim to demonstrate not only that individuals prefer advice from, and give greater weight to the behavior of, lower-ranking individuals, but that they do so because they believe that the psychological effects associated with occupying a low hierarchical rank makes lower-ranking individuals particularly credible and reliable sources of normative information. Specifically, we contend that those of all ranks will believe lower-ranking individuals, because they are more constrained by social norms (Galinsky et al., 2008), are more attentive to these norms, and thus are the most useful sources from which to learn about them.

The present research makes four important contributions. First, we challenge the pervasive claim that high-ranking individuals inevitably dominate low-ranking individuals in the power to influence other employees (Blau, 1964; Mannix & Sauer, 2006; Thye, 2000) by showing that lower-ranking individuals may in some cases have greater influence over individuals' perceptions of the team's descriptive norms. Second, we offer insight into how individuals perceive social norms, a growing and yet underdeveloped area within the literature (e.g., Dannels & Miller, 2017; Morris, Savani, & Fincher, 2019; Tankard & Paluck, 2016). Prior work on newcomer socialization has established that newcomers are proactive in seeking ways to acclimate to the organization (Morrison, 1993) and that successful newcomer socialization yields positive downstream consequences for performance, job satisfaction, job commitment and turnover (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). Much less work, however, has delved into understanding the psychology of norm perception during the process of acclimatization. Third, we provide a novel integration of social hierarchy and social norms literature. Both hierarchy and norms are fundamental components of social and organizational life, yet little work examines their intersection (but see Van Kleef, Homan, Finkenauer, Gündemir, & Stamkou, 2011). In considering how hierarchy and norms interact in the context of norm perception, we aim to deepen theory in each area. Finally, in addition to our contributions to theory, this research could better inform organizational decision-makers who are either looking to maintain or change social norms. To the extent that lower-ranking individuals serve as important sources from whom individuals learn norms, organizational decision-makers may wish to harness or be aware of their unique influence.

### 1.1. Perceiving descriptive social norms in groups and teams

Before considering what role hierarchical rank may play in descriptive social norm perception, we consider social norm perception as a process in small groups and teams. We restrict our focus to social norm perception in individuals' reference groups or reference teams. Though it's possible that team norms would be shared at the organization level, our interest focuses on intra-team norms. This means that when we say "higher-ranking individuals" or "lower-ranking individuals", we mean those of higher or lower rank but *within* the same reference group. In a company of 300 individuals, the CEO would therefore only be of relevance to our inquiry if the target individual were joining the top management team. Similarly, an entry level staffer would only be of relevance if one were joining that staffer's team.

Continuing with our opening example, how might Sam go about getting a sense of social norms when joining her new team? She could receive summary information if available, but in a small group or team it is most likely she would rely primarily on advice or direct observation (Morrison, 1993). Sam's goal in seeking advice or observing behavior is to get an accurate perception of the average behavior within the team for a given behavior. This means that Sam would want advisors who she thinks are most aware of the team's behavior and to observe behavior that she thinks is the most representative of this average behavior. After collecting this information, Sam can factor it into her own behavior to the extent she wishes given other idiosyncratic constraints (Azjen,

1991). For example, she can anticipate receiving negative feedback from her team if her assumptions are incorrect, thereby providing the opportunity to modify her behavior accordingly. Morris et al. (2019) suggest that learning new descriptive norms in a cross-cultural context proceeds through a similar guess-and-correct meta-cognitive process of learning.

In this paper we focus only on the first stage of this longer-term process of norm learning. In this first stage, which we classify as norm perception, Sam is arriving at her first perception of the social norm and must choose whose advice to seek or whose behavior to weigh more heavily in forming her perception of the team's social norm. Within this context, we examine the expectations of people like Sam regarding the value or diagnosticity of received advice or observed behavior as a function of the hierarchical rank of the advisor or individual observed. We chose to examine social norm perception's interaction with hierarchy in teams because social hierarchy is ubiquitous in teams and in organizations more broadly (Leavitt, 2005; Tannenbaum, Kavic, Rosner, Vianello, & Wieser, 1974; Tiedens, Unzueta, & Young, 2007; Zitek & Tiedens, 2012). A team's hierarchy has long been a fundamental lens through which to understand social interactions in organizations (see Anderson & Brown, 2010; Halevy, Chou, & Galinsky, 2011; Keltner, Van Kleef, Chen, & Kraus, 2008; Magee & Galinsky, 2008) and thus, understanding how preference in norm advisors varies by targets' hierarchical rank is a natural question.

### 1.2. Considering hierarchical rank

We investigate how targets' hierarchical position in a work group or work team affects the extent to which they are sought by people like Sam as signals of the descriptive social norm through either their advice or observation of their behavior. Accordingly, our theorizing and empirical investigation focus on the construct of hierarchical rank (Fragale, Sumanth, Tiedens, & Northcraft, 2012; Kennedy & Anderson, 2017), as opposed to related concepts such as power and status. We define hierarchical rank as an explicit rank-ordered position in a group or team as indicated by job title or position in the team's reporting structure (Magee & Galinsky, 2008; Tost, 2015). Scholars have noted that hierarchical rank tends to covary with both status (i.e., respect and admiration; Anderson, Hildreth, & Howland, 2015; Weber, 2018) and power (i.e., control over resources; Keltner, Gruenfeld, & Anderson, 2003). While recent research suggests status and power are distinguishable constructs (Fast, Halevy, & Galinsky, 2012; Blader, Shirako, & Chen, 2016; Halevy et al., 2011), in most cases, they are highly correlated (Bales, Strodtbeck, Mills, & Roseborough, 1951; Magee & Galinsky, 2008). We focus on hierarchical rank as opposed to these closely related constructs because, compared to status and power, rank is easily visible and thus, we argue, is more likely to be a distinguishing feature in search processes that employees engage in when formulating an impression of the descriptive social norm. Particularly in considering whom individuals will prefer as norm advisors, the hierarchical rank of existing team members will be more readily assessed than their implicit power and/or status (should these dimensions imperfectly covary with one's rank).

One consensus in the team hierarchy literature is that higher-ranking individuals hold disproportionate social influence relative to their lower-ranking counterparts (Chatman & Kennedy, 2010; Hogg & Tindale, 2008; Magee & Galinsky, 2008; Pfeffer, 2013). In their review of social hierarchies, Magee and Galinsky (2008) delineated the characteristics of high-ranking employees, stating they are "able to set agendas, norms for discussion, rules for behavior, standards for thought and opinion..." (p. 367). In addition, those who rise to positions of higher rank are likely to be considered prototypes of the group social identity (Van Knippenberg, Van Knippenberg, De Cremer, & Hogg, 2004) and thus provide a model to which other team members wish to adhere. Based on this evidence, the predominant assumption in the literature appears to be that higher-ranking individuals not only would

have a greater ability to affect social norms, but also would be the best sources from whom to gain advice on such norms.

However, we suggest that lower-ranking individuals will be viewed as being better sources from whom to gain advice on social norms. As a result of the power accompanying positions of high rank (Keltner et al., 2003; Tost, 2015), high-ranking individuals can be expected to have impoverished conceptions of much of the social nature of their environment relative to low-ranking individuals. In general, high-ranking individuals are less motivated to attend to the needs and actions of others, more immune to conformity pressures, and often ignore constraints on their behavior (Galinsky et al., 2008; Whitson et al., 2013; Magee & Smith, 2013). Low-ranking individuals, by contrast, stand to benefit greatly by forming and acting on accurate perceptions of others' intentions and needs. This leads low-ranking individuals to engage in an increased monitoring of others' behavior—and the environment more broadly—in search of potential threats along with opportunities to climb the hierarchy (Emerson, 1962; Fiske, 1993), suggesting that they may be more attentive to relevant norm information. Should observers anticipate these diverging motivations as a function of individuals' rank, high-ranking individuals may be viewed as less accurate sources of norm information compared to low-ranking individuals.

The assumption that the psychology of lower-ranking individuals will give them an advantage when it comes to having an accurate understanding of norms leads us to predict that individuals who are trying to form an impression of a team's norm will prefer to acquire advice from a lower-ranking rather than a higher-ranking employee. Importantly, we aim to demonstrate not only that individuals prefer advice from lower-ranking individuals, but that they do so because they believe the psychological effects of occupying a lower rank increases attentiveness to such norms. We therefore hypothesize:

- *H1*: Individuals, regardless of personal rank, are more likely to choose advice about social norms from lower-ranking team members than from higher-ranking team members.
- *H2*: Individuals prefer advice about social norms from lower-ranking team members rather than higher-ranking team members because they perceive them to be more attentive to descriptive social norms.

While direct advice is one key way that social norm information can be communicated, there are additional sources of normative information, such as direct observation of behavior. We suggest that just as individuals perceive lower-ranking advice as more diagnostic of the descriptive social norm, individuals will perceive lower-ranking behavior as more diagnostic of the descriptive social norm than higher-ranking behavior.

There are two key reasons to expect that individuals may see the behavior of low-ranking individuals as more diagnostic of the team's social norm. First, if newcomers believe that lower-ranking individuals have more accurate information about social norms, they are likely to believe that this information will be reflected in their behavior. Second, individuals may expect more variability in the behavior of higher-ranking individuals. Higher-ranking individuals in a team are more likely to deviate from social norms (Anderson & Galinsky, 2006; Fast, Gruenfeld, Sivanathan, & Galinsky, 2009; Hollander, 1958; Stamkou, van Kleef, Homan, & Galinsky, 2016), and when an individual is observed deviating from the norm, they are assumed to be higher power (Van Kleef et al., 2011). Given this, individuals may infer that the behavior of high-ranking individuals is less diagnostic of social norms than that of their low-ranking counterparts. We therefore hypothesize:

*H3*: Individuals will weigh lower-ranking behavior more than higher-ranking behavior when estimating a team's descriptive social norm.

## 2. Overview of studies

Five studies examine how group or team members' hierarchical rank

affects the extent to which they are preferred as advisors regarding social norm information. Study 1 surveys employees at a mid-sized advertising firm and asks whom in their reference group they would recommend a newcomer talk to about job responsibilities vs. social norms. Study 2 replicates the preference for lower-ranking norm advisors in a controlled lab context with enhanced psychological realism. Studies 3–4 probe our proposed psychological mechanism—that lower-ranking team members are seen as more attentive relative to high-ranking team members—using correlational and moderation approaches, respectively. These studies also address plausible alternative explanations as to why lower-ranking individuals may be preferred sources of norm information (e.g., similarity, honesty). Finally, Study 5 shifts from advice to behavior to examine whether individuals also believe lower-ranking individuals' behavior is more informative of a team's norms, relative to high-ranking individuals' behavior.

Across all studies, sample sizes were determined before analyzing data, and all data were collected in a single wave. For all studies, we report all measures we administered either in the main manuscript or [Supplemental Materials](#). Additionally, three of our five studies (Studies 2–4) were pre-registered on [AsPredicted.org](#). All data and pre-registrations are available at [https://osf.io/r5uxa/?view\\_only=5a0976e491d5486d9e2b5e0dd413a7ef](https://osf.io/r5uxa/?view_only=5a0976e491d5486d9e2b5e0dd413a7ef).

## 3. Study 1: Employees recommend lower-ranking advisors for norm information

Study 1 sought evidence for our primary claim: People believe lower-ranking advisors have more useful information about descriptive social norms than higher-ranking advisors. To do so, we sampled employees from a mid-sized advertising firm on the West Coast and asked them whom in their reference group they would recommend as a source for information about (1) social norms versus (2) job responsibilities. We chose advice about job responsibilities because it was a neutral control condition that would apply across many situations.

### 3.1. Methods

**Participants.** An “organizational culture” survey was sent out to all the employees at a mid-sized advertising firm on the West Coast. Seventy-five employees (52.0% women, 62.5% response rate) completed the survey in exchange for entry into a gift card lottery.

**Procedure.** As part of a larger survey, employees indicated the eight employees with whom they interacted most often at work (see [Supplemental Materials](#) for exact wording). We set the scope at eight employees in order to approximate the size of a team (see [Hackman, 1990](#)), though readily concede that the number is arbitrary. To select those with whom they interacted most, employees were given a drop-down menu of all company employees. Each employee's eight chosen individuals formed his or her unique reference group and was used for two later questions. After responding to several other questions about their organizational culture asked on behalf of the organization, employees were asked the two target questions that assessed whom they would recommend for advice on social norms versus job responsibilities. Thus, this study employed a 2-condition within-subjects design (norm advice vs. job advice).

**Measures.** Employees were asked to imagine that there was a new hire at the company with whom they would be interacting regularly. Employees were then asked to recommend a member of their reference group as having particularly useful advice or information for the newcomer on a given topic. For each question, they were asked to choose one name from the eight names that they had earlier listed as their reference group. To allow the question to apply similarly for all employees taking the survey across the organization, the newcomer was not given a specific job role or title. Employees were asked to “try to pick the person who would offer the best advice or information regardless of the specific role.”

**Norm inquiry.** Employees were told that the “new hire wants to get a sense of the norms and culture at [Company Name]” and were asked who in their reference group would have “advice or information about the culture” that “would be the most useful.”

**Job inquiry.** Employees were then told that the “same new hire wants to get a better sense of their job roles and responsibilities and how to best fulfill them” and were again asked to choose one member of their reference group “whose advice or information...would be the most useful.”

Employee responses to both of these questions were coded to represent the chosen advisors' hierarchical rank within the organization. To determine the rank of each chosen advisor, we had a knowledgeable senior contact at the organization rank all the organizational job titles and company departments from highest to lowest rank (see [Supplemental Materials](#) for more information). If two job titles were of equal rank within a department, they were given equivalent numbers to represent their rank. This resulted in 55 unique hierarchical ranks within the organization, each associated with an individual or individuals (with a rank of 1 representing highest ranked CEO and a rank of 55 representing those at the lowest rank). These ranks were then merged with the advisor choices so that each employee's response was represented by two ranks: one representing the rank of the advisor for norm-related inquiry, the other representing the rank of the advisor for job-related inquiry.<sup>1</sup>

### 3.2. Results

We hypothesized that employees would value advice from lower-ranking individuals more for understanding social norms than for understanding job roles and responsibilities. On average, employees chose a rank near the 23rd highest in the organization for job advice,  $M = 22.59$ ,  $SD = 14.27$ ,  $95\% CI = [19.30, 25.87]$ , but chose closer to the 27th highest in the organization (and the midpoint of the hierarchy) for norm advice,  $M = 27.03$ ,  $SD = 12.59$ ,  $95\% CI = [24.13, 29.92]$ .

In order to test whether the 27th rank (preferred for norm advice) was significantly lower than the 23rd rank (preferred for job advice), we fit an ordinal mixed-model (within-subjects model; [Kuznetsova, Brockhoff, & Christensen, 2015](#)) regression with a random intercept per participant using a dummy variable (Norm Advice = 1, Job Advice = 0) to predict the rank of advisor that employees recommended to the newcomer. We found that employees recommended significantly lower-ranked fellow employees for advice on company norms than for advice on job roles and responsibilities,  $B = 0.70$ ,  $SE = 0.30$ ,  $95\% CI = [0.11, 1.29]$ ,  $z = 2.34$ ,  $p = 0.020$ . To offer a sense of effect size, this is similar to a Cohen's  $d$  of 0.33.

To ensure that this effect was robust with regards to employees' own rank, we ran the same model adding an additional variable representing the employee's position in the overall organizational hierarchy as a continuous variable and found the same effect,  $B = 0.70$ ,  $SE = 0.30$ ,  $95\% CI = [0.11, 1.29]$ ,  $z = 2.33$ ,  $p = 0.020$ . Employees' own position in the hierarchy was not a significant predictor of advisor choice,  $b = -0.01$ ,  $SE = 0.02$ ,  $95\% CI = [-0.04, 0.02]$ ,  $z = -0.91$ ,  $p = 0.36$ . We also ran the same model with alternative specifications, including clustering standard errors at the participant level rather than a multilevel model, and a within-subjects ANOVA treating the dependent variable as a continuous rather than an ordinal variable. All results remain directionally equivalent with significance at the  $p < 0.05$  level. We thus find evidence in favor of H1.

<sup>1</sup> We acknowledge that this is a high number of unique ranks. Previous research has documented the proliferation of job titles particularly in more white collar industries ([Baron & Pfeffer, 1994](#)). We believe that this accounts for why this organization is structured with so many ranks. We did allow the organization contact to construct ranks with ties (e.g. saying that two job titles held identical ranks), but these were used infrequently.

### 3.3. Discussion

Study 1 finds preliminary support for our primary hypothesis: Employees at an advertising firm suggested that a newcomer to their organization would be better served talking to a lower-ranking employee for norm advice than for job advice. Furthermore, these effects were not specific to employees who occupied a particular rank. Regardless of whether employees themselves occupied a high or low rank in the organization, they recommended relatively lower-ranking advisors on the matter of social norms compared to advisors on the matter of job responsibilities.

Despite finding support for our hypothesis, Study 1 is limited in a few ways. First, the relatively small sample size prohibits us from obtaining appropriate statistical power to test whether one's own rank influences whom one suggests as an advisor. While Study 1 demonstrates that employees on average choose lower-ranking advisors for norm compared to job advice, it's possible that those of higher rank within a team would choose higher-ranking advisors not just for job advice but also for norm advice. Controlling for employees' own rank in Study 1 does not rule out this possibility. Put differently, it's possible that the results we observe in Study 1 are primarily due to how (the more numerous) lower-ranking participants evaluated advisors for job versus norm advice, and that higher-ranking participants actually chose those of similar rank for both kinds of advice.

Second, though our organizational contact ranked the hierarchy with regards to the job titles and reporting structure, it's possible that others in the organization would order these job titles differently or would not assign such fine-grained distinctions between ranks. Given we are primarily interested in team hierarchies which are simpler than organizational hierarchies, we should replicate this effect in a smaller team setting where hierarchical rank is simpler and objectively defined. The larger hierarchy in this organization may account for why individuals preferred norm advisors who were more towards the midpoint of the hierarchy in this study (albeit still lower ranked than their preferred job advisors; see General Discussion for further exploration.)

Third, our survey language may have implied to employees that the newcomer would be lower-ranking (because he or she wished to understand the norms and thus likely defer to them) and thus biased survey participants in the direction of our hypothesized effect. Finally, despite documenting the effect in an organizational context, the hypothetical nature of the survey questions we asked might have influenced responses in a way that limits the ability to generalize this finding to a setting with higher stakes. Study 2 was designed with these limitations in mind.

## 4. Study 2: Students in lab prefer lower-rank advisors for norm information

The goal of Study 2 was threefold. First, in order to examine whether high-ranking individuals, specifically, choose lower-ranking advisors for norm advice, we assigned all participants to occupy the role of a high-ranking team member. We therefore expected participants to choose the higher-ranking advisor for job advice, because this role was most similar to the one they expected to occupy, but predicted their preference for norm advice would shift to the lower-ranked advisor. Second, we presented the rank of potential advisors in a simple, objective way that also controlled for the potential numerical majority of lower-ranking employees in Study 1. Third, to ensure the effect identified in Study 1 generalizes to higher stake situations, we convinced participants that they would actually be joining one of two existing teams of their choosing. Thus, the information they would receive from their chosen advisor would ostensibly affect their experience on the team.



#### 4.1. Methods

**Participants.** The study employed a two-part design. We pre-registered (<http://aspredicted.org/blind.php?x=by7fy7>) that we would include in our analyses only those participants who participated in both parts of the study, as we wanted to ensure participants believed the team context we described to them was real. We further pre-registered that we would collect participants until 120 had completed both parts of the study or until our specified stop date in order to maintain our timeline. One hundred and fifty participants participated in Phase One by our pre-registered specified stop date, of whom 87 participated in Phase Two as well (59.77% women,  $M_{Age} = 25.80$ ,  $SD_{Age} = 9.85$ ). We limit our analyses to those qualified participants as specified in our pre-registration, however our results remain unchanged if we use the sample of everyone who participated online in Phase One regardless of whether they participated in Phase Two<sup>2</sup>. In this and all subsequent studies we sought to power our studies commensurate to our interest in the phenomenon as recommended by Simonsohn (2014).

**Procedure and measures.** This study employed a two-condition within-subjects design as follows. The study was advertised by a lab at a private West Coast university. Specifically, the advertisement materials stated, “We are conducting a pre-test for an in-lab study that will happen in the upcoming weeks. To be considered for the in-lab study, please take this pre-test. The pre-test involves answering questions about yourself and attitudes about details of the in-lab study. It is approximately 10 min long.” Interested participants then clicked the link to take the ostensible pretest to the in-lab study. They were told that Phase Two would take place at the lab, which they would be able to sign up for upon completion of Phase One (i.e., the pre-test). Next, all participants read the following information:

When you come to the lab for Phase 2 you’ll be temporarily joining one of two existing research assistant teams. Each team is tasked with using materials provided by the lab to generate new, creative products which serve as stimuli for ongoing studies. The current teams meet once a week and have been working together for a little over a quarter.

The teams are both made up of 4 people: two higher ranking Research Supervisors and two lower ranking Research Assistants.

All team members work interdependently on the tasks they’re given. There are regular “all hands on deck” meetings in which all the team members meet to work through any difficulties that arise.

The lab is interested in seeing how these two teams adapt to the addition of a new team member. When you come to the lab, you will join one of these two teams and help them for one of their stimuli generation sessions.

You will be joining one of the teams in the role of Research Supervisor. You will ultimately get to choose which of the two teams you work with.

Participants had to stay on the page for 90 s before they were allowed to advance to the next page where our primary dependent variables appeared.

In this and subsequent studies, we intentionally include an equal number of team members per rank in order to control for possible numerical majority confounds (i.e., participants choosing lower-ranking individuals simply because they constitute the majority rank in a team). Additionally, given the potential interpersonal interaction concerns posed by asking high-ranking team members for advice on any subject (e.g., worried about looking incompetent, anxious about taking up high-ranking individuals’ time), in this study we told participants that they would *read* pre-written advice from current team members. When

reading written advice, such interpersonal concerns no longer apply.

After reading the description of Phase Two, we asked participants, “Whose notes and advice from each of the two teams would you want to read in order to get a sense of the job obligations, role, and duties of your new position?” Answer options included: “One of the Research Supervisors” and “One of the Research Assistants.” Next, we asked participants, “Whose notes and advice from each of the two teams would you want to read in order to get a sense of the team’s overall culture and norms?” We emphasized that participants could choose the same or different advisors for the two types of advice. Answer options included: “One of the Research Supervisors” and “One of the Research Assistants.”

Next, participants provided their age and gender, after which they were thanked for participating in the pretest. Lastly, they were told, “You will now be eligible to sign up for the in lab portion entitled ‘Phase 2: Groups & Teams.’” A link was provided that took them to a signup page for the in-lab portion of the experiment. Once participants arrived at the lab for the ostensible experiment and signed in, a research assistant informed them that there was, in fact, no team exercise, paid them, and debriefed them on the purpose of the study.

#### 4.2. Results

First, we sought to replicate Study 1’s finding—that low-ranking advisors would be preferred for norm advice more than job responsibility advice. When asked whose advice they would prefer for job advice 87.36% of participants preferred the same-ranked Research Supervisor ( $n = 76$ ). However, when asked whose advice they preferred for social norms 75.86% of participants ( $n = 66$ ) preferred the lower-ranked Research Assistant. To test whether this difference was statistically significant, we transformed the data such that each participant had two rows of data—one that indicated their choice for job responsibility advisor, and one that indicated their choice for social norm advisor. A mixed model binomial regression with a random intercept for participant revealed a significant effect,  $B = -3.08$ ,  $SE = 0.41$ , 95%  $CI = [-4.12, -2.31]$ ,  $z = -7.54$ ,  $p < 0.001$ , such that participants were significantly more likely to choose the lower-ranked advisor for social norm advice than for job responsibility advice.

Next, we used a proportion test to examine whether participants’ preference for lower-ranking advice for social norms was greater than random chance advisor selection (50%). We pre-registered this as a more conservative test of our hypothesis because it could be possible that one would prefer lower-ranking advice comparatively more for norm than job advice but still prefer higher-ranking advisors on average for norm advice (e.g., if participants had chosen the higher-ranking advisor 100% of the time for job advice and 80% for norm advice). We find that the observed 75.86% preference for the lower-ranking Research Assistant’s advice for social norms was significantly greater than chance, 95%  $CI = [65.50\%, 84.40\%]$ ,  $p < 0.001$ .

#### 4.3. Discussion

Study 2 replicated the results found in Study 1 in a lab setting with higher stakes and enhanced psychological realism. The preference for lower-ranking advisors was higher in the case of norm advice than job responsibility advice. Moreover, even though all participants thought they were going to occupy the role of the higher-ranking team member, more than 50% of participants still preferred the low-ranking advisor for norm advice.

Studies 1 and 2 use two in-person contexts to provide evidence for our first hypothesis that individuals view lower-ranking team members as better sources of advice on social norms, even when (Study 2) they themselves expect to occupy a higher rank. However, we have not yet addressed why this is the case. We proposed in Hypothesis 2 that lower-ranking individuals are preferred sources of norm information because they are assumed to be more attentive to social norms. In Studies 3 and

<sup>2</sup> With these participants included, a mixed model binomial regression with a random intercept for participant reveals a significant effect,  $B = -3.10$ ,  $SE = 0.32$ , 95%  $CI = [-3.79, -2.50]$ ,  $z = -9.77$ ,  $p < 0.001$ , such that participants were more likely to choose the lower-ranked advisor for social norm advice than for job responsibility advice.

4 we examine this account as well as two alternative explanations.

### 5. Study 3: Perceived attentiveness predicts preference for lower-rank advisors for norm information

Having consistently demonstrated a preference for norm advice from low-ranking individuals (Studies 1–2), the primary aim of Study 3 was to establish evidence of our proposed mechanism—namely, that low-ranking individuals are seen as more attentive to their environment than high-ranking individuals, and this increased attentiveness makes their norm advice more useful.

In addition to testing our mechanism (H2), we also examine two possible alternative explanations for the preference for low-ranking norm advisors. First, in line with prior work suggesting that greater similarity with a target predicts conformity to perceived descriptive norms (Rimal, Lapinski, Cook, & Real, 2005), we examine whether participants perceive greater similarity to low-ranking individuals and whether this, in turn, predicts the preference for their norm advice. This analysis was designed to assess the possibility that participants in Studies 1–2 thought they were more similar to the lower-ranking advisors and thus thought that the advice of a lower-ranking perspective would be more applicable to them. Despite finding a preference for low-ranking norm advisors after controlling for employees' own rank (Study 1) and after assigning all participants to the high-ranking position (Study 2), Study 3 directly measures perceived similarity to offer a more conservative test as to whether this explains our findings.

Second, we measure the perceived honesty of low-ranking individuals relative to high-ranking individuals. It is possible that participants think norm advice from low-ranking individuals is more useful not because they are more attentive to and aware of team norms, but rather because they communicate this information more honestly. Indeed, prior work suggests having more power in a situation can lead one to lie or mislead others (Boles, Croson, & Murnighan, 2000) and that those of higher rank may believe their group members behave more ethically than they in fact do when wrongdoing is occurring (Kennedy & Anderson, 2017). This would suggest that even if our participants think that low- and high-ranking individuals have equally useful norm information, high-ranking individuals could be more prone to strategically misrepresenting the information, perhaps in an attempt to make their team seem more desirable. Finding evidence of our proposed mechanism (i.e., attentiveness) and failing to find support for these two possible alternative mechanisms (i.e., similarity, honesty) would give greater confidence in our proposed psychological process.

#### 5.1. Methods

**Participants.** Two-hundred participants were recruited from Prolific Academic (prolific.co) to take a survey experiment in exchange for monetary payment. In order to take part, participants were required to indicate on Prolific's in-platform screening tool that they worked as part of a workgroup at least part of the time in their current job. Given that this study focused on team interactions, we chose this restriction to increase the relevance of the study for participants. As stated in our pre-registration (<https://aspredicted.org/blind.php?x=32ht8y>), we excluded participants who incorrectly answered an attention check item at the end of the survey. The item asked them to choose the job title they were assigned in the study from a list of four possible titles. Forty participants chose incorrectly, leaving a final sample of 160 participants (48.12% women,  $M_{Age} = 30.16$ ,  $SD_{age} = 8.52$ ). If we exclude participants in any study, we have pre-registered this exclusion for transparency.

**Procedure.** This study made use of a two-condition within-subjects design, similar to Studies 1 and 2. Participants were asked to imagine that they were “joining a new job as part of the marketing team” and that they would be joining in the role of Brand Director. They were then shown the organizational chart (see Fig. 1) which depicted six ranks

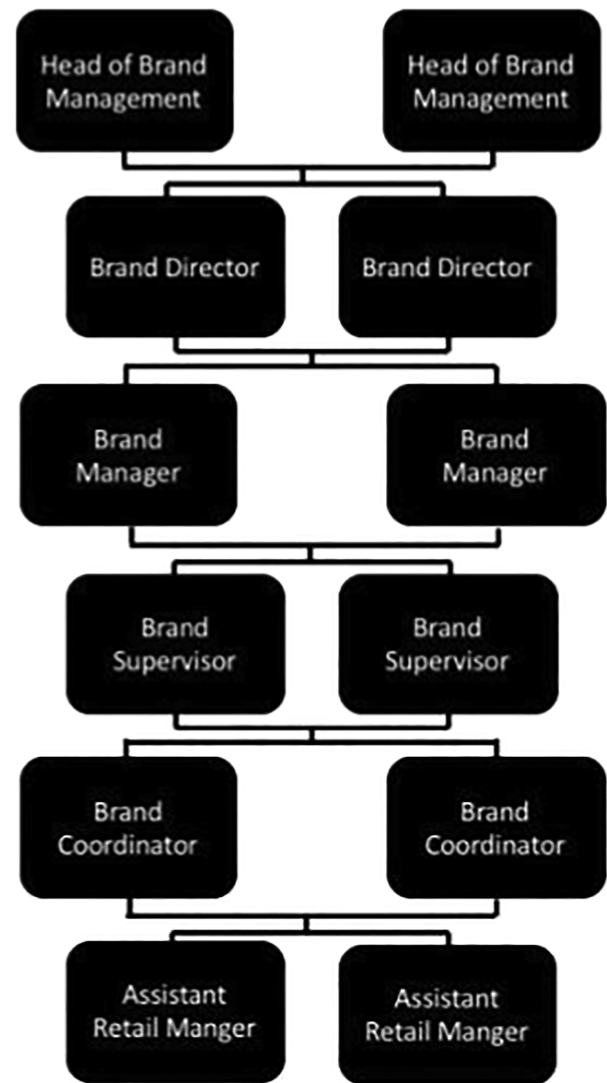


Fig. 1. Team hierarchy stimulus in Study 3.

indicated by job title with two employees occupying each rank. The Brand Director occupied the second-highest rank. As in Study 2, we assigned everyone to a relatively higher rank in the team as a conservative test of H1. While lower-ranking employees may choose lower-ranking advisors for reasons of similarity or comfort, examining the preference of higher-ranking employees offers a more stringent test of the research hypothesis.

Similar to Study 2, participants then read that “before [they] start [their] job [they] will be able to read written descriptions of advice from different team members in order to get a better sense of [their] job role and of the culture of the team.” Participants were further told that they could choose the same or different advisors for different kinds of advice. See OSM for the full text of the survey.

**Measures.** Participants first responded to the two main dependent variables in the following order.

**Job advice.** Participants were told to imagine they “were trying to get a sense of the job responsibilities of [their] new position” and were asked “whose advice [they] would prefer to read to learn about this.” They were given a binary choice of the Brand Director (second-highest ranked job role and the participants' assigned incoming role) or the Brand Coordinator (fifth-highest ranked job role, thus relatively lower-ranked than the participants' assigned incoming role.)

**Norm advice.** Participants were told to imagine they “were trying to get a sense of the team's culture and norms (e.g. how often team

members socialize with each other, what kind of hours they work, how often they give each other positive feedback, how often they admit they made mistakes)” and were asked “whose advice [they] would prefer to read to learn about this.” The behaviors were chosen because of their trans-situational relevance, neutrality and believability. Participants were given the same binary choice as for job advice above.

Participants then responded to three scales in a randomized order. These scales were designed to investigate our proposed mechanism (i.e., attentiveness of low-ranking individuals), as well as to rule out several alternative explanations. For each construct, the scale was designed to explicitly compare higher and lower-ranking team members. That is, a mean of “1” would indicate that participants thought the construct applied extremely more to higher-ranking team members than lower-ranking team members, while a mean of “7” would indicate the opposite, with the midpoint reflecting that participants thought it applied equally across ranks or was unrelated to rank.

**Perceived attentiveness.** Participants answered four items on a 7-point Likert scale from “Strongly Disagree” to “Strongly Agree.” The items all probed the hypothesis that the lay person expects that lower-ranking individuals are more attentive than higher-ranking individuals to descriptive social norms. The four items were as follows: “People at the top of the hierarchy are often out of touch with how most team members act,” “People at the bottom of the hierarchy end up paying attention to day-to-day happenings the most,” “People at the top of the hierarchy sometimes don’t pay attention to how team members behave on a daily basis,” and “People at the bottom of the hierarchy are usually more aware of the daily happenings of the team members” ( $\alpha = 0.77$ ).

**Perceived similarity.** Participants answered four items on a 7-point Likert scale from “Strongly Disagree” to “Strongly Agree.” The items all probed a possible alternative explanation for the selection of low-ranking norm advisors, namely, participants’ feelings that they were more similar to lower-ranked individuals than higher-ranked individuals. The four items were as follows: “In this new team, I feel most similar to people at the BOTTOM of the hierarchy,” “In this new team, I will have the most in common with people at the BOTTOM of the hierarchy,” (both reverse coded) as well as, “In this new team, I feel most similar to people at the TOP of the hierarchy,” and “In this new team, I will have the most in common with people at the TOP of the hierarchy” ( $\alpha = 0.86$ ).

**Perceived honesty.** Participants answered four items on a 7-point Likert scale from “Strongly Disagree” to “Strongly Agree.” The items all probed a second possible alternative explanation for our findings, namely, that participants think lower-ranking advisors would have more honest advice about the team than higher-ranking advisors. The four items were as follows: “People at the bottom of the hierarchy are more honest than those at higher ranks about what is happening in the team,” “People at the bottom of the hierarchy are less likely to misrepresent the truth than people at other higher ranks,” “People at the bottom of the hierarchy are more open than those at higher ranks about what is happening in the team,” and “People at the bottom of the hierarchy are more frank than those at higher ranks about what is happening in the team,” ( $\alpha = 0.70$ ).

Participants then provided demographic information as well as their rank within their current team by indicating which rung on a ladder image best represented their current rank (Anderson, Kraus, Galinsky, & Keltner, 2012). This measure was used only for exploratory and not pre-registered analyses. We report exploratory analyses at the end of the results section for those interested.

5.2. Results

We predicted that individuals would prefer lower-ranking advisors more for norm advice than for job advice (H1). Of the 160 participants, 91.87% ( $n = 147$ ) preferred the Brand Director’s advice for information on job responsibilities, but 75.00% ( $n = 120$ ) preferred the relatively

lower-ranking Brand Coordinator’s advice about the team’s social norms. To examine whether this difference was statistically significant, we fit a binomial mixed-model regression using *glmer* in R to predict advisor choice (Brand Director = 1, Brand Coordinator = 0) from a dummy variable indicating the type of advice sought (Norm = 1, Job = 0) with a random intercept for participant to control for within-subject variance. Supporting H1 and as predicted, we find that participants were significantly more likely to choose lower-ranking advisors for advice on social norms than job responsibilities,  $b = -3.52$ ,  $SE = 0.34$ , 95%  $CI = [-4.72, -2.89]$ ,  $z = -10.30$ ,  $p < 0.001$ .

We then examined our proposed mechanism, perceived attentiveness, as well as the two alternative explanations for our pattern of findings, perceived similarity and perceived honesty. Recall that for each construct, the scale was designed to explicitly compare higher- and lower-ranking team members. That is, a mean of “1” would indicate that participants thought the construct applied extremely more to higher-ranking team members than lower-ranking team members, while a mean of “7” would indicate the opposite.

Participants did view the lower-ranking team members as relatively more attentive than higher-ranking team members,  $M = 5.44$ ,  $SD = 0.91$ , 95%  $CI = [5.29, 5.58]$ . This was significantly greater than the midpoint of the scale,  $t(159) = 12.97$ ,  $p < 0.001$ . On average, participants also viewed themselves as somewhat more similar to the low-ranking team members,  $M = 4.32$ ,  $SD = 1.12$ , 95%  $CI = [4.15, 4.49]$ ,  $t(159) = -2.02$ ,  $p = 0.045$ , and viewed the lower-ranking team members as more honest than higher-ranking team members,  $M = 4.85$ ,  $SD = 0.91$ , 95%  $CI = [4.71, 4.99]$ ,  $t(159) = 4.86$ ,  $p < 0.001$ . For zero-order correlations of each measure, see Table 1.

As stated in our pre-registration, to test each of these mechanisms, we fit a binomial mixed-model regression with three interaction terms, each containing one of the three mechanism scales interacted with a dummy variable for advice type (Norm = 1, Job = 0). If an interaction term were significant and negative, it would indicate that the more participants agreed with the items measuring the proposed mechanism (or the alternative mechanisms) the more likely they were to choose lower-ranking advisors for norm advice, relative to job advice, as compared to those who disagreed more with the mechanism items.

First, we found a significant interaction of perceived attentiveness and advice type in the predicted direction,  $B = -1.07$ ,  $SE = 0.38$ , 95%  $CI = [-1.81, -0.32]$ ,  $z = -2.81$ ,  $p = 0.005$ , see Table 2, Model 4. Put differently, 85% participants ( $n = 69$  out of 81) who held above-the-median views of the perceived attentiveness of lower-ranking individuals chose the lower-ranking Brand Coordinator for norm advice whereas only 64% of participants ( $n = 51$  out of 79) who held below-the-median views chose the lower-ranking Brand Coordinator for norm advice. However, speaking against the alternative similarity and honesty accounts, we found no significant interaction of perceived similarity and advice type,  $B = -0.52$ ,  $SE = 0.37$ , 95%  $CI = [-1.24, 0.19]$ ,  $z = -1.43$ ,  $p = 0.153$ , or perceived honesty and advice type,  $B = 0.35$ ,  $SE = 0.40$ , 95%  $CI = [-0.44, 1.14]$ ,  $z = 0.87$ ,  $p = 0.383$ . Put differently, we found no evidence that perceived similarity to low-ranking individuals or increased honesty of low-ranking individuals was related to the choice of low-ranking advisors for norm versus job advice.

To ensure the robustness of these findings, we used a multiple binomial regression using all three scales to predict only choice of advisor

Table 1  
Correlation among mechanism variables in Study 3.

Mechanisms	1	2	3
1. Attentiveness			
2. Honesty	0.37***		
3. Similarity	-0.03	-0.06	

Note. \*\*\*  $p < 0.001$ .

**Table 2**  
Choice of advisor as a function of advice type and lay beliefs about rank.

	Dependent variable:			
	Choice of Advisor (1 = High Rank, 0 = Low Rank)			
	(1)	(2)	(3)	(4)
Type of Advice (Norm = 1, Job = 0)	–3.636*** (0.355)	–3.613*** (0.362)	–3.580*** (0.351)	–3.834*** (0.400)
Attentiveness	0.258 (0.279)			0.509 (0.323)
Type * Attentiveness	–0.859* (0.337)			–1.068** (0.380)
Similarity		0.461 (0.294)		0.510† (0.309)
Type * Similarity		–0.455 (0.346)		–0.525 (0.367)
Honesty			–0.269 (0.291)	–0.484 (0.344)
Type * Honesty			–0.052 (0.347)	0.352 (0.404)
Constant	2.454*** (0.297)	2.514*** (0.313)	2.456*** (0.297)	2.646*** (0.348)
Observations	320	320	320	320
Note: All scales are z-scored.	*p < 0.05, **p < 0.01, ***p < 0.001			

for norm advice (not pre-registered). We found that participants' greater belief in low-ranking advisors' attentiveness significantly predicted their choice of a lower-ranking advisor for norm advice,  $B = -0.56$ ,  $SE = 0.20$ ,  $95\% CI = [-0.96, -0.17]$ ,  $z = -2.79$ ,  $p = 0.005$ , but neither their perception of similarity to lower-ranking individuals,  $B = -0.01$ ,  $SE = 0.20$ ,  $95\% CI = [-0.40, 0.38]$ ,  $z = -0.07$ ,  $p = 0.941$ , nor their evaluation of lower-ranking advisors' honesty did,  $B = -0.13$ ,  $SE = 0.21$ ,  $95\% CI = [-0.55, 0.29]$ ,  $z = -0.62$ ,  $p = 0.532$ .

Finally, we examined the effects of our exploratory control variable, one's self-perceived rank outside of the study context. Of the 160 participants, 131 indicated that they currently worked as part of a team. (Note: this suggests 29 did not respond consistently between Prolific's screening questions and our own screening question. We have kept these participants in the prior analyses because we had not pre-registered this question as an exclusion.) For these participants, we performed a series of exploratory analyses to test whether their rank in their team outside of the study had any impact on their selections of advisors inside of the study. We found no significant effect of one's hierarchical rank on advisor selection for norms versus job information,  $B = -0.42$ ,  $SE = 0.49$ ,  $z = -0.87$ ,  $p = 0.384$ . In addition, one's hierarchical rank had no impact on probability of choosing the lower-ranked advisor for norm information specifically,  $B = 0.07$ ,  $SE = 0.08$ ,  $z = 0.81$ ,  $p = 0.420$ , while perceived attentiveness still did,  $B = -0.75$ ,  $SE = 0.26$ ,  $z = -2.92$ ,  $p = 0.004$ .

### 5.3. Discussion

Study 3's results replicate the main findings from Studies 1 and 2: low-ranking advisors are preferred for information about the team's descriptive social norms. Furthermore, this study provides preliminary support for our proposed mechanism—lower-ranking team members are perceived to be more attentive to normative information, and perceived attentiveness correlates with the preference for lower-ranking norm advisors. In contrast, ratings of the perceived honesty of, and the similarity to, low-ranking individuals did not correlate with the preference for low-ranking norm advisors.

## 6. Study 4: Manipulated attentiveness moderates advisor preference

Having found preliminary evidence for our proposed mechanism in Study 3, Study 4 seeks additional evidence that the perceived attentiveness of low-ranking team members contributes to their preferred status as norm advisors. In Study 3 we demonstrated that people's lay perceptions of team rank associate employees lower in the hierarchy with greater attention to daily behavior than employees higher in the hierarchy. To complement this correlational approach, in Study 4 we manipulate this lay perception. If the perception of attentiveness indeed drives norm advisor selection, we would expect individuals to choose a lower-ranking advisor when they are described as attentive, but also to switch to choosing a higher-ranking advisor if they are explicitly described as attentive and the lower-ranked individual is described as less so. In other words, Study 4 provides an experimental test of our proposed mechanism.

### 6.1. Methods

**Participants.** We advertised for 450 participants on Prolific Academic (prolific.co) to take a survey experiment in exchange for monetary payment resulting in 452 survey responses. In order to take part, participants were required to indicate on Prolific's in-platform screening tool that they worked as part of a workgroup at least part of the time in their job. We chose this restriction to increase the relevance of the study for participants because the study focused on team interactions.

As in Study 3, we pre-registered (<https://aspredicted.org/blind.php?x=jj4p8k>) to exclude participants who incorrectly answered an attention check item at the end of the survey. The item asked them to choose the job title they were assigned in the study from a list of four possible titles. Eighty-eight participants chose incorrectly, leaving a final sample of 364 participants (54.39% women,  $M_{Age} = 31.15$ ,  $SD_{Age} = 13.64$ ).

**Procedure.** The procedure was similar to that used in Study 3. Participants were again asked to imagine that they were “joining a new job as part of the marketing team” and that they would be joining in the role of Brand Director. They were then shown the same organizational chart as in Study 2 in which the Brand Director occupied the second-highest rank. Participants then read that “before [they] start [their] job [they] will be able to read written descriptions of advice from different team members in order to get a better sense of [their] job role and of the culture of the team.”

Participants were then assigned to one of three between-subjects conditions (Matched vs. Mismatched vs. Control) designed to manipulate the perceived attentiveness of the target advisors. In the Matched Condition participants read that they would get some additional information about the team members. They read that “the current Brand Directors typically do not pay much attention to the day to day happenings of the team and are fairly out of touch with how most team members act” and that “the current Brand Coordinators typically pay a great deal of attention to the day to day happenings of the team and are very in touch with how most team members act.” We label this condition “Matched” as the description of the two roles matches what we hypothesize perceivers' lay theories are about relative attentiveness of low- vs. high-ranking team members. In the Mismatched Condition these descriptions were reversed, such that the Brand Coordinators were described as less attentive and the Brand Directors as more attentive. We label this condition “Mismatched” as the description of the two roles is the opposite of what we hypothesize perceivers' lay theories are about relative attentiveness of low- vs. high-ranking team members. In the Control Condition participants received no additional information about either the Brand Directors or Brand Coordinators. Participants were then asked on the same page to answer the two dependent measures.



**Measures.** Participants responded to the same two questions from Study 2, each probing preference for a Brand Coordinator versus a Brand Director for either job advice or norm advice.

Participants then answered demographic questions and one about their rank within their current team, which again showed them an image of a ladder and asked them to click the rung that best represented their current rank. As in Study 3, this measure was used only for exploratory and not pre-registered analyses. We report those exploratory analyses at the end of this section for those interested.

## 6.2. Results

The Control Condition in this study was identical in procedure and measures to that of Study 3. Replicating Study 3, in the control condition, participants (all of whom believed they would occupy the role of higher-ranked Brand Director) disproportionately chose the Brand Director's advice for job advice (93.10%,  $n = 108$  out of 116 participants) but the lower-ranked Brand Coordinator's advice for norm advice (81.89%,  $n = 95$  out of 116 participants).

In the Matched Condition, when the Brand Director was described as less attentive and the Brand Coordinator more attentive, this pattern shifted such that 72 out of 123 participants (58.54%) chose the higher-ranked advisor for job advice while 116 out of 123 chose (94.31%) the lower-ranked advisor norm advice. In the Mismatched Condition, when the high-ranking Brand Director instead was described as more attentive and the lower-ranking Brand Coordinator described as less attentive, this pattern changed: Participants overwhelmingly preferred the Brand Director's advice for job advice (96.00%,  $n = 120$  out of 125) but, in contrast to the Matched and Control Conditions, participants now also preferred the higher-ranking Brand Director for norm advice (84.80%,  $n = 106$  out of 125), indicating that they valued the attentiveness of the advisor above and beyond other possible features of hierarchical rank.

To test our hypothesis that manipulating the attentiveness of advisors at each rank would override participants' reliance on their lay theory of hierarchical differences when seeking advice, we fit a binomial mixed-model regression predicting advisor choice using three dummy coded variables, one representing advice topic (Norm = 1, Job = 0) and two representing condition (Control vs. Matched; Control vs. Mismatched) and their interaction. The two interaction terms in this regression thus test whether participants chose higher- versus lower-ranking advisors for job versus norm advice at different rates in the Matched Condition versus the Control Condition or in the Mismatched Condition versus the Control Condition. We found a significant interaction such that participants in the Mismatched Condition were significantly more likely to choose higher-ranking advisors for norm advice than those in the Control Condition,  $B = 2.65$ ,  $SE = 0.68$ , 95%  $CI = [1.27, 4.01]$ ,  $z = 3.90$ ,  $p < 0.001$ . We found no significant interaction when comparing the norm versus job advisors in the Matched versus the Control Condition,  $B = 0.96$ ,  $SE = 0.61$ , 95%  $CI = [-0.26, 2.17]$ ,  $z = 1.56$ ,  $p = 0.118$ , see Fig. 2 for a visual representation of this pattern.

Finally, we examined our exploratory measure of one's own rank outside of the study context. Of the 364 participants, 317 indicated that they currently worked as part of a team. For these participants we performed a series of exploratory analyses to test whether their rank in their team outside of the study had any impact on their selections of advisors inside of the study. We found no significant effect of one's hierarchical rank on advisor selection for norms versus job information,  $B = -0.03$ ,  $SE = 0.05$ ,  $z = -0.71$ ,  $p = 0.479$ . In addition, one's hierarchical rank had no impact on the probability of choosing the lower-ranked advisor for norm information specifically,  $B = -0.01$ ,  $SE = 0.06$ ,  $z = -0.12$ ,  $p = 0.907$ , while both condition manipulations remained significant at  $p < 0.001$  and  $p = 0.007$ .

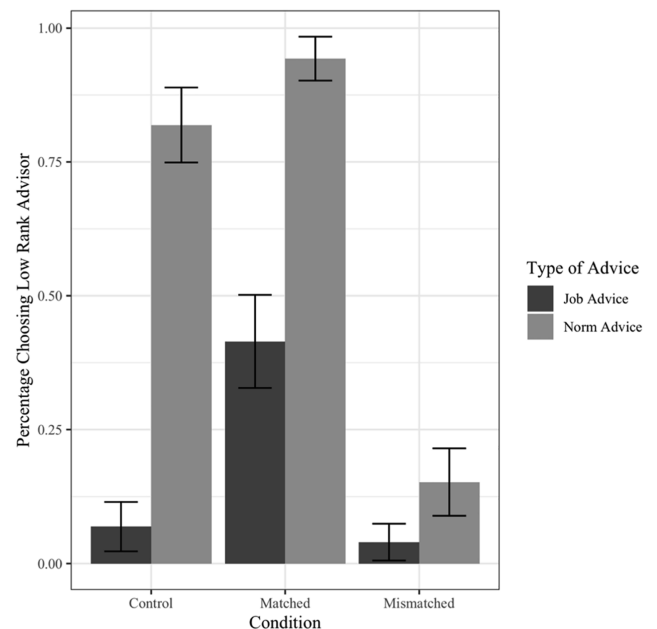


Fig. 2. The percentage of participants choosing the lower-ranked advisor instead of the higher-ranked advisor for job versus norm advice across conditions. Error bars are 95% CIs.

## 6.3. Discussion

Extending the findings from Study 3, Study 4 provides further evidence that the preference for low-ranking norm advisors is driven by the assumption that low-ranking team members are more attentive than higher-ranking team members. When high-ranking team members were described as more attentive, preference for high-ranking team members increased. However, when low-ranking team members were described as attentive, we saw no difference in preference for norm advisor compared to the control condition in which no attentiveness information was given.

Thus far, we have demonstrated a robust preference for lower-ranking norm advisors, and established that this preference is due to the perception that lower-ranking team members are generally more attentive than their high-ranking counterparts. However normative information is not only acquired via advice-seeking. Individuals may also opt to observe team members' behavior as opposed to directly ask them for their perceptions of the norm. We hypothesize that just as individuals perceive lower-ranking advice as more diagnostic of the descriptive social norm, individuals will perceive lower-ranking behavior as more diagnostic of the descriptive social norm than higher-ranking behavior.

## 7. Study 5: Lower-rank behavior is viewed as more diagnostic of descriptive norm

Study 5 extends beyond the domain of advice-seeking to examine whether our findings generalize to another ubiquitous norm perception process, namely, observing team members' behavior. Testing whether individuals disproportionately rely on low-ranking behavior (vs. high-ranking behavior) in estimating a team's norms accomplishes two goals. First, while our previous studies attempted to control for interpersonal concerns related to advice-seeking (e.g., concerns about seeming incompetent, concerns about taking up high-ranking team members' time), it is still possible that such concerns contributed to our observed preference for norm advice from low-ranking team members. If we were to replicate the reliance on low-ranking individuals in the context of behavioral observation, we can more convincingly prevent interpersonal concerns from playing a role in participants' stated

preferences. Second, while receiving direct advice is one way that social norm information can be communicated, social norm information is also continuously and readily available through directly observing other team members' behavior. Thus, replicating the reliance on lower-ranking individuals in the context of behavioral observation would greatly increase the generalizability of our findings.

In Study 5 participants were first asked to estimate (guess) a behavioral norm within an organization. They next were presented with information about the behavior of both a higher-ranking and a lower-ranking team member simultaneously and, on the basis of this information, were asked to estimate the broader team's descriptive social norm, defined as the average behavior within a team. Were participants to believe that the behavior enacted by the higher-ranking team member is more representative of the social norm, their estimates of the average behavior should shift in the direction of the higher-ranking behavior. We predict, in contrast, that participants will view the behavior enacted by the lower-ranking team member as more representative of the social norm, and as a consequence will shift their estimates in the direction of the lower-ranking behavior.

### 7.1. Methods

**Participants.** Three hundred and one participants (69.77% women,  $M_{Age} = 35.96$ ,  $SD_{Age} = 11.30$ ) were recruited from an online national survey pool maintained by a large West Coast university lab.

**Procedure.** Participants read that we, the researchers, had “recently completed a survey of an incubator of startup teams” that had 147 teams total and that in each team “we surveyed all team members individually and also performed observations of the team in order to understand the company and its team dynamics.” Participants then read that it was their task to try “to guess various workplace dynamics of these teams as best as [they could] using the information we provide.”

Participants then learned that all teams in the incubator currently had the same hierarchical structure. They were shown an image (see Fig. 3) of the structure which depicted two team members each at three hierarchical ranks. In order to advance in the survey participants had to complete three comprehension check items to ensure they understood the team structure. Each question read, “How many team members hold the [highest/middle/lower] ranking job title in this team?” and had an open-ended response box. Once participants had correctly entered “2” for each of these questions, they could advance in the survey to the guessing game task.

The guessing game task proceeded as follows. Participants first learned about a given behavior that had been measured as part of the ostensible prior research, e.g., “we measured how many hours members of Company B spend socializing with other team members outside of work in one week”. To make the guessing game task more believable, participants were first asked to provide their best guess of the average behavior in the team, e.g., the “best guess of the average number of hours team members from Company B spend socializing with each other outside of work in one week.” In reality, participants' initial estimate would not be used in any analyses.

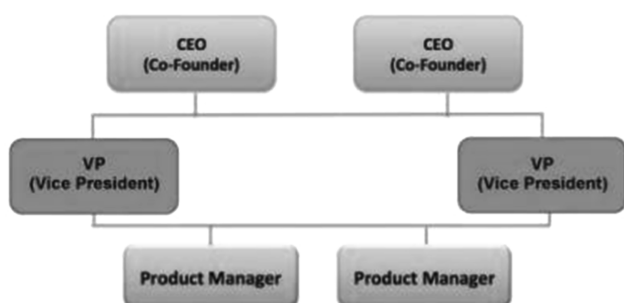


Fig. 3. Team hierarchy stimulus for Study 5.

After providing their initial estimate, participants were shown information regarding how *two* of the six team members behaved for the given behavior, e.g., “consider that one of the [CEOs/VPs/Project Managers] in Company B spends 5 h a week socializing with other team members outside of work, but that one of the [CEOs/VPs/Project Managers] in Company B spends 1 h a week socializing with other team members outside of work.” The titles associated with each behavior were fully randomized, which is to say that sometimes participants were told, for example, that the CEO spent 5 h socializing and the VP spent 1 h socializing, and sometimes they were told that the VP spent 5 h socializing and the CEO spent 1 h socializing. This randomization allows us to test how participants weight the observed behavior by rank because in each condition participants are provided with the same information. After learning this information, participants entered a revised second estimate of the average behavior within the team.

Participants completed this guessing task for ten different behaviors in a randomized order. The behaviors (amount of socializing with work peers outside of work, number of days worked from home, number of hours worked, positive feedback given in meetings, frequency of disagreement in meetings, number of times team members asked for help, number of times team members admitted they were wrong or made a mistake, number of days team members dressed casually for work, and number of days of vacation team members took during the year) were chosen because of their trans-situational relevance, neutrality, and believability. We used several different behaviors to stimulus sample (Monin & Oppenheimer, 2014) and ensure that any patterns observed were not limited to a specific social norm. Though we acknowledge that the choice of these ten behaviors is somewhat arbitrary, we view choosing a variety of behaviors—even if arbitrary—as helpful in demonstrating the potential robustness of the phenomenon of interest.

**Measure.** Our dependent variable was participants' second estimate of the average team behavior (recall that the initial estimate participants provided was simply to increase believability of the guessing game task and was not intended to be used for analyses). For each behavior we used participants' second estimate to calculate two scores per participant. This calculation involved two steps:

First, we computed the absolute value of the difference between the information provided for each of the two targets and the participant's guess of the average. Second, we divided each of these two absolute values by the difference between the lower-ranking information and the higher-ranking information presented in any given trial in order to standardize the metric across behaviors. This resulted in two scores, one representing the distance between a participant's estimate and the higher-ranking target's information, and one representing the distance between a participant's guess and the lower-ranking target's information. Following the example given above, imagine in one trial a participant was told that the CEO spends 5 h a week socializing and the PM spends 1 h a week socializing. Imagine that after seeing this information, the participant guesses the average amount of time team members spend socializing is 2 h a week. Their value for the high-ranking team member's behavior would be the absolute value of the high-ranking behavior (5) minus their estimate (2) divided by the difference between the high-ranking behavior (5) and the low-ranking behavior (1), i.e., 0.75. Their value for the low-ranking team member's behavior would be the absolute value of the low-ranking behavior (1) minus their estimate (2) divided by the difference between the high-ranking behavior (5) and the low-ranking behavior (1), i.e., 0.25. A score of 0 thus indicates that participants believed the observed behavior was *extremely representative* of the social norm, whereas a score higher than 0 indicated that participants believed that the observed behavior was *less representative* of the social norm. This absolute distance metric is similar to that used by Rader, Soll, and Larrick (2015) when investigating representative advice.

**Table 3**  
Descriptive statistics per norm behavior.

Behavior	Low rank behavior	High rank behavior	Participant guess
Express Disagreement	3.2	7.3	5.47 (4.44)
	7.3	3.2	5.91 (3.83)
Dress Casually	5.2	22.1	11.94 (6.55)
	22.1	5.2	16.08 (7.73)
Respond to Emails	21	43	29.73 (11.06)
	43	21	31.66 (14.15)
Ask for Help	3	13	9.01 (8.31)
	13	3	9.87 (5.92)
Work from Home	6	2	4.06 (2.23)
	2	6	4.34 (9.58) <sup>1</sup>
Admit Mistakes	1	4	2.83 (1.81)
	4	1	3.01 (2.12)
Give Positive Feedback	5.5	1.2	3.67 (2.24)
	1.2	5.5	3.31 (2.17)
Socialize Outside of Work	5	1	3.67 (2.85)
	1	5	3.24 (2.06)
Vacation Days Taken	8	21	13.14 (6.09)
	21	8	14.73 (5.44)
Hours Worked	58	42	46.49 (10.51)
	42	58	45.66 (12.99)

Note: Low Rank and High Rank behavior columns represent the behavior participants viewed in the study before making their second guess. Participant Guess column reflects the dependent variable before transformation. Standard deviations in parentheses.

<sup>1</sup> A few participants seemed to have misunderstood the question here and entered in impossible values. The prompt asked for the number of days employees worked from home in one month, and four participants entered in values greater than 31 (impossible even if one was required to work every day of a month). This causes the large *SD* present.

## 7.2. Results

The within-subjects design resulted in a total of 3010 estimates across participants (301 participants each making one estimate of the social norm for ten different behaviors) and thus 6020 revised estimate distances (two per guess representing the distance of the estimate from the high-ranking behavior and the low-ranking behavior). We report descriptive statistics per behavior in Table 3.

We hypothesized that participants would view lower-ranking behavior as more diagnostic of the descriptive social norm than higher-ranking behavior, such that participants' estimates of the average team behavior would be closer to the information provided about the low-ranking team members than the high-ranking team members. To test this hypothesis, we used a linear mixed-model (within-subject; Kuznetsova et al., 2015) with a random intercept per participant and a random intercept per target behavior nested within-participant. Using this model, we tested whether participants were significantly more likely to view the behavior of lower-ranking or higher-ranking team members as more representative of the team descriptive norm (as indicated by a lower absolute revised distance score). We found that participants' revised estimates of the behavior were significantly closer to the behavior of the lower-ranking team member than they were to the higher-ranking team member,  $B = -0.08$ ,  $SE = 0.01$ , 95%  $CI = [-0.06, -0.10]$ ,  $t(3009) = -7.28$ ,  $p < 0.001$ . For a visual representation of the results per behavior see Fig. 4.

Thus far, our results reveal that participants saw the behavioral information about the lower-ranked individual of each pair they learned about to be more diagnostic of the social norm and estimated the average behavior to be closer to that of the lower-ranked individual. But our design allows us to test our hypothesis regarding the diagnosticity of lower-ranking behavior in an additional way. Specifically, we are able to test whether the rank of the lower-ranking individual in each pair (i.e., middle-ranked VP vs. lowest-ranked PM) also affects norm perception. For example, if Participant A learns that the CEO

dresses casually 5.2 days and the lowest-ranked PM dresses casually 22.1 days, and Participant B learns that the CEO dresses casually 5.2 days and the middle-ranked VP dresses casually 22.1, our hypothesis would predict that Participant A's guess of the social norm should be closer to 22.1 than Participant B's because the PM is lower ranked than the VP. To test this, we fit another linear mixed-model with the same random effects as the previous one, now adding an additional dummy variable indicating whether the lower-ranking information displayed was associated with the rank of VP or the rank of PM. We find that in addition to the effect referenced above whereby individuals guess the social norm to be closer to the lower-ranking behavior within each pair, individuals who view the lowest-ranked Project Manager's behavior instead of the middle-ranked Vice President's behavior as the lower rank in a pair guess the social norm to be even closer to the Project Manager's behavior,  $B = -0.05$ ,  $SE = 0.026$ , 95%  $CI = [-0.11, -0.003]$ ,  $t(2939.95) = -2.08$ ,  $p = 0.037$ .

## 7.3. Discussion

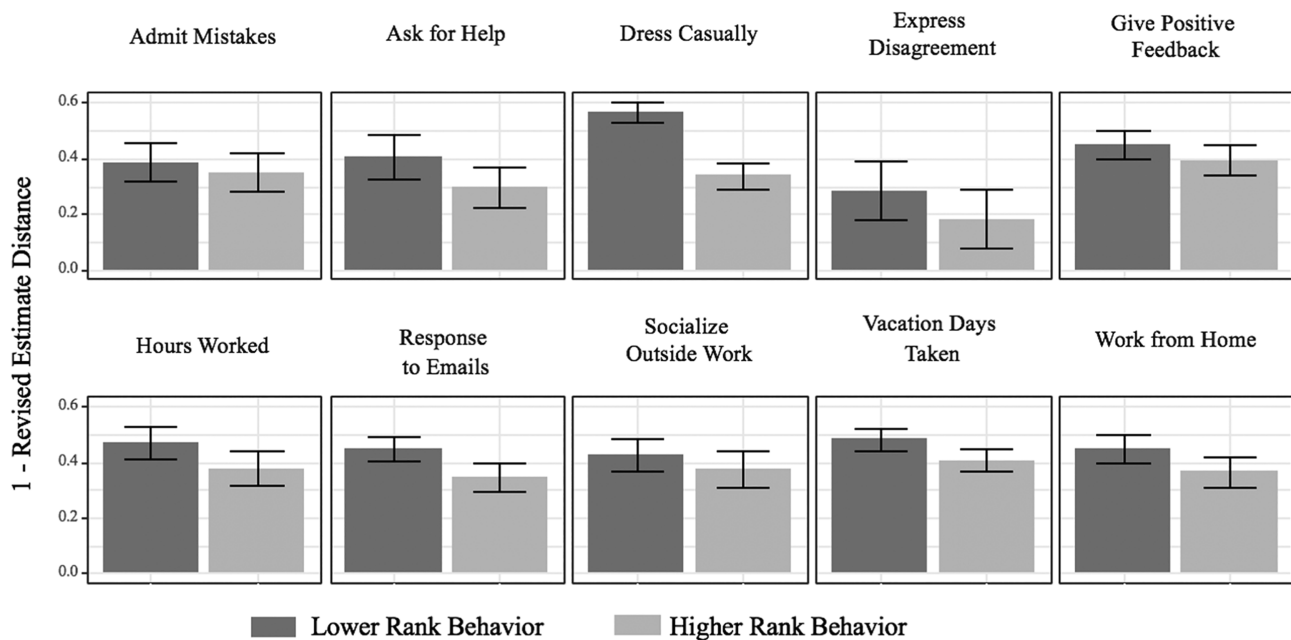
Oftentimes, in forming an impression of a team's norm, individuals do not have the opportunity to seek or read advice from an individual of their choosing and instead have to rely on observing the behavior of those around them. Study 5 provides evidence that individuals view lower-ranking team members' behavior as more diagnostic of the team's average behavior. Across ten example behaviors in organizations, participants consistently estimated the average behavior of the team to be closer to that of the lower-ranking team member's behavior. This suggests that participants are influenced more by lower-ranking behavior than higher-ranking behavior in forming their estimate of a team's descriptive norm when relying on observations of team behavior.

## 8. General discussion

Whereas extant literature emphasizes the influence wielded by higher-ranking individuals especially with regards to organizational culture, we have identified an element crucial to team functioning in which lower-ranking individuals may hold more influence. Across five studies, we demonstrate that individuals prefer advice about a team's social norms from lower-ranking team members, and give greater weight to the behavior of lower-ranking team members when assessing the descriptive norm. Our findings suggest that individuals believe advice from lower-ranking individuals is more useful and informative because they believe lower-ranking individuals are more attentive to their environment. Our results did not depend on observers' expected rank within the team, nor on an expectation of there being more lower-ranking individuals in the team (e.g., pyramidal hierarchy). Collectively, these findings suggest that lower-ranking individuals may have greater influence than higher-ranking individuals in the domain of social norm perception in groups and teams.

### 8.1. Theoretical contributions

Given the ubiquity of hierarchy in team interactions, as well as the appeal of occupying a high rank (Magee & Galinsky, 2008), it comes as no surprise that decades of organizational research has focused on high-ranking members in the workings of groups and teams (Keltner et al., 2003; Schein, 2010). However, the asymmetric focus on those at the top of the hierarchical ladder has led to an underappreciation of the role of lower-ranking individuals in group phenomenon. For example, prior focus on individuals of higher rank has left holes in our understanding of important organizational phenomena such as creativity (Goncalo, Chatman, Duguid, & Kennedy, 2015; Duguid & Goncalo, 2015) and conformity (Phillips & Zuckerman, 2001). This paper contributes to a growing body of literature that pushes back on the prior overwhelming focus on those with higher rank as the best way to understand social interactions in organizations (e.g., Anicich & Hirsh, 2017; Reit,



**Fig. 4.** Absolute distance between revised estimate and lower-ranking vs. higher-ranking behavior. *Note:* We reverse-scored the dependent variable for the purposes of this visualization, such that higher values indicate greater weighting of the target's behavior.

Gruenfeld, & Monin, 2020; Schaerer, du Plessis, Yap, & Thau, 2018). While prior work emphasizes the many ways in which higher-ranking individuals influence others' perceptions and behaviors, we document a unique pathway to influence for lower-ranking individuals; namely, that they are viewed as more diagnostic of the descriptive social norm in groups and teams than their higher-ranking counterparts. By examining the unique features of those with lower rank, our paper further pushes existing theory to a fuller understanding of the nature of organizational hierarchies.

Furthermore, this work contributes to the field's understanding of how organizations might best change or maintain organizational culture. To the extent that team social norms aggregate to broader culture within an organization, examining how individuals perceive social norms in small groups and teams may help us understand how organizational culture is also perceived. Having a strong organizational culture can contribute to improved organizational performance (Chatman & O'Reilly, 2016; Heskett & Kotter, 1992; Sørensen, 2002) and thus research has examined the importance of maintaining organizational culture as an organization scales (Schein, 2010) or merges (e.g., Weber & Camerer, 2003). Additionally, given the influence of organizational culture on employee behavior and firm performance, considerable work has documented the dangers of toxic organizational culture which perpetuate negative or corrupt behavior (Ashforth & Anand, 2003; O'Reilly & Chatman, 1996). The present work highlights a small but critical component of organizational culture processes, namely, how individuals seek advice and information about social norms in their organizations. In doing so, our paper contributes to an emerging literature that attempts to understand the micro processes that underlie the macro changes in organizational culture by deepening the field's understanding of how individuals perceive social norms in everyday life (e.g., Srivastava, Goldberg, Manian, & Potts, 2018).

## 8.2. Limitations and future directions

Throughout our studies, whether focused on advice or perceptions of behavior, we demonstrate a pattern whereby between two-thirds and three-fourths of participants perceive lower-ranking rather than higher-ranking members of the team to be more diagnostic of the descriptive social norm. Our focus in this paper has been demonstrating this as a

robust pattern, and thus we have focused our attention on what the majority of participants do in a given situation. It's worth considering, however, what defines the character of the minority of participants who preferred higher-ranking advice when looking to understand social norms. As an initial attempt to shed light on this question, we ran an additional exploratory study to determine whether those who seek higher-ranking advice for social norms might be characterized by certain personality traits. We found no evidence that those who prefer higher-ranking advice on social norms have a higher sense of power (Anderson, John, & Keltner, 2012), are more Machiavellian (Christie & Geis, 2013), are higher self-monitors (Lennox & Wolfe, 1984), have lower self-esteem (Rosenberg, 1965), are more exchange-oriented (Mills & Clark, 1994) or vary significantly on any of the Big Five personality inventory traits (Gosling, Rentfrow, & Swann, 2003). However, we did find that those who chose lower-ranking advice were more likely to be communally-oriented (Clark, Ouellette, Powell, & Milberg, 1987) and were more likely to have a chronic promotion focus (Higgins & Spiegel, 2004; see Supplemental Materials for full results). While these findings offer some preliminary insight as to what might differentiate those who prefer low vs. high-ranking sources of norm information, this study was exploratory and a fuller understanding must await further research.

While we have demonstrated a general preference for low-ranking advice and behavior when perceiving social norms, we do not take a position on whether such a preference is rational or irrational. However, much of the advice-taking and advice-seeking literature does examine individual behavior through a lens of rationality versus bias (Bonaccio & Dalal, 2006; Gino & Moore, 2007; Soll & Larrick, 2009). It is thus worth considering how the findings of this paper are situated within this spectrum; are lower-ranking individuals a better source for normative information or are participants using a faulty strategy in seeking out lower-ranking team members to learn social norms? Much of the literature cited in support of our hypotheses would suggest not only that individuals would prefer the lower rank perspective but that they are correct in doing so because those who are higher-ranking are less sensitive to social cues and are poor perspective-takers (Keltner et al., 2003). While the question of rationality is beyond the scope of this paper, we hope that future researchers will further pursue this investigation.



In addition, one might consider, regardless of whether lower-ranking employees are in fact more *accurate* in their norm perception, whether exhibiting a preference for lower rank advice and behavior for social norms is optimal for an employee's workplace reputation and career trajectory. That is, even if lower-ranking team members indeed hold more accurate norm information than higher-ranking team members, it need not necessarily follow that relying on this advice to inform employees' own behavior leads to wholly positive outcomes for them. Instead, the utility of relying on norm advice from low-ranking individuals likely depends on the advice-seeker's motivation. The present research focuses on the motivation to attain an accurate understanding of the descriptive norm—regardless of whether or not advice-seekers aim to use the norm information to inform their own behavior. However, should employees or newcomers instead want to obtain the most useful advice on a dimension other than accuracy, they may display a different preference in norm advisor. For example, different norm advisors may be preferred when the advice-seeker's motivation is to ascend the team hierarchy. Seeking the advice of higher-ranking individuals could lead higher-ranking individuals to attribute greater competence to the advice-seeker (Brooks, Gino, & Schweitzer, 2015), thereby making them appealing sources of information even if the advice-seeker receives less accurate information about the team's norms. Additionally, particularly in larger teams and organizations where there is greater variance in status within one's own rank, individuals might prefer norm advice from high status individuals within their own rank. Given that high status individuals within one's own rank likely have a direct understanding of how to behave in order to achieve greater status, advice-seekers looking for norm information that will help them improve their standing in the organization may turn to similarly-ranked high status others (Hollander, 1958).

Similarly, we have made claims throughout this paper that lower-ranking individuals hold asymmetric influence when it comes to newcomers' search for advice about a team's descriptive norm. However, it's important to emphasize that this is not to say that high-ranking individuals carry no influence as advisors, or that they are seen as worse sources of all types of information. It is highly plausible that, while lower-ranking individuals are perceived as more diagnostic when perceiving social norms, higher-ranking individuals are preferred for advice on other topics. For example, newcomers may prefer advice and information about more abstract concepts, such as organizational values and vision, from higher-ranking individuals. Indeed, higher-ranking individuals operate with a more abstract construal of their environment (Magee & Smith, 2013; Smith & Trope, 2006; Wakslak, Smith, & Han, 2014), perhaps because those of higher rank are often required to do strategic planning using long time horizons typical of abstract construal (Trope & Liberman, 2010). Thus, individuals who are trying to get a sense of more abstract organizational values might believe that the descriptions provided by higher-ranking team members will afford more utility than the more concrete descriptions provided by lower-ranking team members. Future work could examine boundary conditions of our findings based on the type of advice that newcomers are seeking.

Further, in this paper, we have focused on the perception of social norms within small groups and teams, but it is worth considering how such a process might scale to learning larger organizational norms. Within small teams it's likely that all team members have physical access to the relevant daily interactions one would need to observe normative behavior. However, as the team scales, the extremely low-ranking are more likely to be isolated from some parts of the team culture. In this case, it's likely that more mid-ranking employees may be viewed as diagnostic. In essence, we propose that individuals want norm advisors who both have high access to day-to-day interactions and also have the psychological features (e.g., attentiveness) to process these interactions appropriately. Though the extremely low-ranking in large organizations may still be high in the latter qualification, they are likely to be lower in the former than the low-ranking members of the

team in the current research. In such cases, individuals may look slightly higher in the organizational hierarchy for norm information. Indeed, supporting this conjecture, in Study 1, when examining interactions across an entire organization, we see preferred norm advisors—though still lower-ranking than preferred job advisors—are those who are close to the midpoint of the organizational hierarchy.

Relatedly, we have focused primarily on ladder-shaped hierarchies in order to keep an equal number of individuals at each rank, but it is worth considering how our finding might generalize to other hierarchy shapes (e.g., pyramid-shaped hierarchies). Recent research has demonstrated that compared to pyramid-shaped hierarchies, ladder-shaped hierarchies harm team members' interpersonal relations (Yu, Greer, Halevy, & Van Bunderen, 2019). One prediction that follows is that team members in ladder-shaped hierarchies think low-ranking team members are particularly vigilant to norms, as they stand to be mistreated if they fail to behave in accordance to them. Thus, if it were possible to control for the numeric majority confound inherent to pyramid-shaped hierarchies, it may be the case that our effects are less pronounced in pyramid-shaped hierarchies compared to ladder-shaped hierarchies.

### 8.3. Conclusion

Research and theory on organizational culture has often demonstrated that higher-ranking individuals play a disproportionate role in shaping, maintaining or changing an organization's norms and values (O'Reilly & Chatman, 1996; Schein, 1996). The present studies show that the greater influence of high-ranking team members does not apply to the perception of descriptive social norms, an important and enduring motivator for behavior (Allcott, 2011; Paluck et al., 2016). Individuals prefer to receive advice about descriptive social norms from lower-ranking individuals in a team. Further, when individuals observe lower-ranking and higher-ranking behavior, they view the lower-ranking behavior as more representative of the team norm. This insight provides important information for how managers might harness the power of descriptive social norms to help shape positive behaviors in their organizations or teams. Though prior work might suggest that individuals focus up the hierarchical ladder in order to glean various forms of information, this paper suggests that in order to initiate shifts in general perceptions of the norm, managers, rather than just modeling the behavior themselves, should focus on changing the behavior and beliefs of one or two lower-ranking individuals.

### Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.obhdp.2020.08.002>.

### References

- Allcott, H. (2011). Social norms and energy conservation. *Journal of Public Economics*, 95(9–10), 1082–1095.
- Anderson, C., & Brown, C. E. (2010). The functions and dysfunctions of hierarchy. *Research in Organizational Behavior*, 30, 55–89.
- Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology*, 36(4), 511–536.
- Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin*, 141(3), 574.
- Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, 80(2), 313–344.
- Anderson, C., Kraus, M. W., Galinsky, A. D., & Keltner, D. (2012). The local-ladder effect: Social status and subjective well-being. *Psychological Science*, 23(7), 764–771.
- Anicich, E. M., & Hirsch, J. B. (2017). The psychology of middle power: Vertical code-switching, role conflict, and behavioral inhibition. *Academy of Management Review*, 42(4), 659–682.
- Ashforth, B. E., & Anand, V. (2003). The normalization of corruption in organizations. *Research in Organizational Behavior*, 25, 1–52.
- Azjen, I. (1991). The theory of planned behavior. *Organizational Behavior & Human Decision Processes*, 50(2).

- Bales, R. F., Strodtbeck, F. L., Mills, T. M., & Roseborough, M. E. (1951). Channels of communication in small groups. *American Sociological Review*, 16(4), 461–468.
- Baron, J. N., & Pfeffer, J. (1994). The social psychology of organizations and inequality. *Social Psychology Quarterly*, 190–209.
- Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: A meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*, 92(3), 707–721.
- Bettenhausen, K., & Murnighan, J. K. (1985). The emergence of norms in competitive decision-making groups. *Administrative Science Quarterly*, 350–372.
- Blader, S. L., Shirako, A., & Chen, Y. R. (2016). Looking out from the top: Differential effects of status and power on perspective taking. *Personality and Social Psychology Bulletin*, 42(6), 723–737.
- Blau, P. M. (1964). *Exchange and power in social life*. New Brunswick, NJ: Transaction Publishers.
- Boles, T. L., Croson, R. T., & Murnighan, J. K. (2000). Deception and retribution in repeated ultimatum bargaining. *Organizational behavior and human decision processes*, 83(2), 235–259.
- Bonaccio, S., & Dalal, R. S. (2006). Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes*, 101(2), 127–151.
- Brooks, A. W., Gino, F., & Schweitzer, M. E. (2015). Smart people ask for (my) advice: Seeking advice boosts perceptions of competence. *Management Science*, 61(6), 1421–1435.
- Chatman, J. A., & Kennedy, J. A. (2010). Psychological perspectives on leadership. *Handbook of Leadership Theory and Practice*, 159–181.
- Chatman, J. A., & O'Reilly, C. A. (2016). Paradigm lost: Reinvigorating the study of organizational culture. *Research in Organizational Behavior*, 36, 199–224.
- Christie, R., & Geis, F. L. (2013). *Studies in Machiavellianism*. Academic Press.
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6), 1015.
- Clark, M. S., Ouellette, R., Powell, M., & Milberg, S. (1987). Relationship type, recipient mood, and helping. *Journal of Personality and Social Psychology*, 53(1), 94–103.
- Dannals, J. E., & Miller, D. T. (2017). Social norm perception in groups with outliers. *Journal of Experimental Psychology: General*, 146(9), 1342.
- Duguid, M. M., & Goncalo, J. A. (2015). Squeezed in the middle: The middle status trade creativity for focus. *Journal of Personality and Social Psychology*, 109(4), 589.
- Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, 31–41.
- Fast, N. J., Gruenfeld, D. H., Sivanathan, N., & Galinsky, A. D. (2009). Illusory control: A generative force behind power's far-reaching effects. *Psychological Science*, 20(4), 502–508.
- Fast, N. J., Halevy, N., & Galinsky, A. D. (2012). The destructive nature of power without status. *Journal of Experimental Social Psychology*, 48(1), 391–394.
- Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior*, 25(2), 63–87.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48(6), 621.
- Fragale, A. R., Sumanth, J. J., Tiedens, L. Z., & Northcraft, G. B. (2012). Appeasing equals: Lateral deference in organizational communication. *Administrative Science Quarterly*, 57(3), 373–406.
- Galinsky, A. D., Magee, J. C., Gruenfeld, D. H., Whitson, J. A., & Liljenquist, K. A. (2008). Power reduces the press of the situation: Implications for creativity, conformity, and dissonance. *Journal of Personality and Social Psychology*, 95(6), 1450.
- Gino, F., & Moore, D. A. (2007). Effects of task difficulty on use of advice. *Journal of Behavioral Decision Making*, 20(1), 21–35.
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research*, 35(3), 472–482.
- Goncalo, J. A., Chatman, J. A., Duguid, M. M., & Kennedy, J. A. (2015). Creativity from constraint? How the political correctness norm influences creativity in mixed-sex work groups. *Administrative Science Quarterly*, 60(1), 1–30.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr (2003). A very brief measure of the Big-5 personality domains. *Journal of Research in Personality*, 37(6), 504–528.
- Hackman, J. R. (1990). Groups that Work and Those that Don't (No. E10 H123). Jossey-Bass.
- Halevy, N. (2016). *Strategic thinking*. In *Advances in Experimental Social Psychology*, Vol. 54, 1–66.
- Halevy, N., Chou, Y. E., & Galinsky, D. A. (2011). A functional model of hierarchy: Why, how, and when vertical differentiation enhances group performance. *Organizational Psychology Review*, 1(1), 32–52.
- Hesket, J. L., & Kotter, J. P. (1992). Corporate culture and performance. *Business Review*, 2(5), 83–93.
- Higgins, E. T., & Spiegel, S. (2004). *Promotion and prevention strategies for self-regulation*. Handbook of self-regulation: Research, theory, and applications 171–187.
- Hogg, M. A., & Tindale, S. (Eds.). (2008). *Blackwell Handbook of Social Psychology*. Group Processes. John Wiley & Sons.
- Hollander, E. P. (1958). Conformity, status, and idiosyncrasy credit. *Psychological Review*, 65(2), 117.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110(2), 265.
- Keltner, D., Van Kleef, G. A., Chen, S., & Kraus, M. W. (2008). A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Advances in Experimental Social Psychology*, 40, 151–192.
- Kennedy, J. A., & Anderson, C. (2017). Hierarchical rank and principled dissent: How holding higher rank suppresses objection to unethical practices. *Organizational Behavior and Human Decision Processes*, 139, 30–49.
- Kuznetsov, A., Brockhoff, P. B., & Christensen, R. H. B. (2015). Package 'lmerTest'. R package version, 2.
- Leavitt, H. J. (2005). Hierarchies, authority, and leadership. *Leader to Leader*, 2005(37), 55.
- Lennox, R. D., & Wolfe, R. N. (1984). Revision of the self-monitoring scale. *Journal of Personality and Social Psychology*, 46(6), 1349–1364.
- Magee, J. C., & Galinsky, A. D. (2008). 8 social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals*, 2(1), 351–398.
- Magee, J. C., & Smith, P. K. (2013). The social distance theory of power. *Personality and Social Psychology Review*, 17(2), 158–186.
- Mannix, E. A., & Sauer, S. J. (2006). Status and power in organizational group research: Acknowledging the pervasiveness of hierarchy. *Advances in Group Processes*, 23, 149–182.
- Miller, D. T., & Prentice, D. A. (2016). Changing norms to change behavior. *Annual Review of Psychology*, 67, 339–361.
- Mills, Judson, & Clark, Margaret (1994). Communal and exchange relationships: Controversies and research. In Ralph Erber, & Robin Gilmour (Eds.). *Theoretical frameworks for personal relationships*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Monin, B., & Oppenheimer, D. M. (2014). The limits of direct replications and the virtues of stimulus sampling. *Social Psychology*, 45(4), 299–300.
- Morris, M. W., Savani, K., & Fincher, K. (2019). Metacognition fosters cultural learning: Evidence from individual differences and situational prompts. *Journal of Personality and Social Psychology*, 116(1), 46.
- Morrison, E. W. (1993). Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, 78(2), 173.
- O'Reilly, C. A., & Chatman, J. A. (1996). Culture as social control: Corporations, cults, and commitment. *Research in Organizational Behavior*, 18, 157–200.
- Paluck, E. L., Shepherd, H., & Aronow, P. M. (2016). Changing climates of conflict: A social network experiment in 56 schools. *Proceedings of the National Academy of Sciences*, 113(3), 566–571.
- Pfeffer, J. (2013). You're still the same: Why theories of power hold over time and across contexts. *Academy of Management Perspectives*, 27(4), 269–280.
- Phillips, D. J., & Zuckerman, E. W. (2001). Middle-status conformity: Theoretical re-statement and empirical demonstration in two markets. *American Journal of Sociology*, 107(2), 379–429.
- Rader, C. A., Soll, J. B., & Larrick, R. P. (2015). Pushing away from representative advice: Advice taking, anchoring, and adjustment. *Organizational Behavior and Human Decision Processes*, 130, 26–43.
- Reit, E., Gruenfeld, D. H., Monin, B. (2020). The aspiration to rank second. Working paper.
- Rimal, R. N., Lapinski, M. K., Cook, R. J., & Real, K. (2005). Moving toward a theory of normative influences: How perceived benefits and similarity moderate the impact of descriptive norms on behaviors. *Journal of Health Communication*, 10(5), 433–450.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton.
- Schaefer, M., du Plessis, C., Yap, A. J., & Thau, S. (2018). Low power individuals in social power research: A quantitative review, theoretical framework, and empirical test. *Organizational Behavior and Human Decision Processes*, 149, 73–96.
- Schein, E. H. (1996). Culture: The missing concept in organization studies. *Administrative Science Quarterly*, 229–240.
- Schein, E. H. (2010). *Organizational culture and leadership*. San Francisco, CA: John Wiley & Sons.
- Smith, P. K., & Trope, Y. (2006). You focus on the forest when you're in charge of the trees: Power priming and abstract information processing. *Journal of Personality and Social Psychology*, 90(4), 578.
- Soll, J. B., & Larrick, R. P. (2009). Strategies for revising judgment: How (and how well) people use others' opinions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35(3), 780.
- Sørensen, J. B. (2002). The strength of corporate culture and the reliability of firm performance. *Administrative Science Quarterly*, 47(1), 70–91.
- Srivastava, S. B., Goldberg, A., Manian, V. G., & Potts, C. (2018). Enculturation trajectories: Language, cultural adaptation, and individual outcomes in organizations. *Management Science*, 64(3), 1348–1364.
- Stamkou, E., van Kleef, G. A., Homan, A. C., & Galinsky, A. D. (2016). How norm violations shape social hierarchies: Those who stand on top block norm violators from rising up. *Group Processes & Intergroup Relations*, 19(5), 608–629.
- Sunstein, C. R. (1996). Social norms and social roles. *Columbia Law Review*, 96(4), 903–968.
- Tankard, M. E., & Paluck, E. L. (2016). Norm perception as a vehicle for social change. *Social Issues and Policy Review*, 10(1), 181–211.
- Tannenbaum, A. S., Kavcic, B., Rosner, M., Vianello, M., & Wieser, G. (1974). *Hierarchy in organizations: An international comparison*. San Francisco, CA: Jossey-Bass.
- Thye, S. R. (2000). A status value theory of power in exchange relations. *American Sociological Review*, 407–432.
- Tiedens, L. Z., Unzueta, M. M., & Young, M. J. (2007). An unconscious desire for hierarchy? The motivated perception of dominance complementarity in task partners. *Journal of Personality and Social Psychology*, 93(3), 402.
- Tost, L. P. (2015). When, why, and how do powerholders "feel the power"? Examining the links between structural and psychological power and reviving the connection between power and responsibility. *Research in Organizational Behavior*, 35, 29–56.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, 117(2), 440.
- Van Kleef, G. A., Homan, A. C., Finkenauer, C., Gündemir, S., & Stamkou, E. (2011). Breaking the rules to rise to power: How norm violators gain power in the eyes of others. *Social Psychological and Personality Science*, 2(5), 500–507.
- Van Knippenberg, D., Van Knippenberg, B., De Cremer, D., & Hogg, M. A. (2004). Leadership, self, and identity: A review and research agenda. *The Leadership Quarterly*, 15(6), 825–856.

- Wakslak, C. J., Smith, P. K., & Han, A. (2014). Using abstract language signals power. *Journal of Personality and Social Psychology*, 107(1), 41.
- Weber, M. (2018). *Class, status, party* (pp. 20–27). Routledge.
- Weber, R. A., & Camerer, C. F. (2003). Cultural conflict and merger failure: An experimental approach. *Management Science*, 49(4), 400–415.
- Whitson, J. A., Liljenquist, K. A., Galinsky, A. D., Magee, J. C., Gruenfeld, D. H., & Cadena, B. (2013). The blind leading: Power reduces awareness of constraints. *Journal of Experimental Social Psychology*, 49(3), 579–582.
- Yu, Siyu, Greer, Lindred, Halevy, Nir, & Van Bunderen, Lisanne (2019). On ladders and pyramids: Hierarchy's shape determines relationships and performance in groups. *Personality and Social Psychology Bulletin*, 45(12), 1717–1733.
- 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.