



# The Dynamic Nature of Status Across Groups: Status Spillovers, Variance, and Disagreements

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**The Dynamic Nature of Status Across Groups:  
Status Spillovers, Variance, and Disagreements**

A dissertation presented

by

Catarina R. Fernandes

to

The Committee for the PhD in Business Studies

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

in the subject of

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ABSTRACT

In an increasingly global world, where organizations are moving towards more cross-functional and flexible structures, a single individual may experience a range of different status levels across the various professional and personal groups and contexts he/she belongs to. How do these potentially contrasting experiences of status affect individuals' self-perceptions, behavior and interactions towards others, and ultimately a group's dynamics and outcomes? This dissertation draws attention to the broader status context that individuals bring with them to the team, investigating this proposition from three different perspectives: 1) testing how the level of status that an individual experiences in one group can “spill over” and influence self-perceptions, behavior, and status judgments by peers in other unrelated groups; 2) analyzing how status variance – the extent to which one's status level varies across the different groups one belongs to – affects individuals both intra- and interpersonally; and 3) exploring how team members' cultural context can generate status disagreement within the team and ultimately impact team performance. In doing so, it contributes to the literatures on social hierarchies, team functioning, and multi-cultural diversity in groups, demonstrating the consequential importance of taking into consideration the aggregate experience of status across the various groups and contexts individuals belong to.

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Catarina

*This dissertation is dedicated to my husband, Alberto Fernandes,  
and to our children, Francisca and Vicente –  
both of whom were born at the same time as this work.*

## INTRODUCTION

Think about the various groups you belong to – in both personal and professional domains, larger and smaller groups, and including those in which your membership is optional and those in which it is not. Now think about how much status you enjoy in each of those groups – how much respect and prestige your group members seem to afford you, and how much influence you carry compared with other people in each group. Chances are, you thought of several different groups, and that there is some degree of variation in terms of how much status you believe you have in each one of them. If you gave this thought exercise enough attention, you may have gone back and forward in thinking about the different groups, and potentially even tweaked your status self-assessment in some of the first groups you thought of as you reconsidered them in relation to the status you enjoy in other groups. This complex, interrelated, and dynamic relationship between the various status experiences we find ourselves in as we go through our personal and professional lives is precisely the focus of this dissertation.

Status is ubiquitous; it is something we strive for, that deeply affects the way we see ourselves and interact with others. Formally, it is defined as the relative level of respect, prominence, and esteem that individuals enjoy in the eyes of others (Anderson, John, Keltner, & Kring, 2001). Two specific aspects of this definition play a particularly important role in the work underlying this dissertation – the fact status is subjective, existing in the eyes of others, and its relative nature. Status distinguishes itself from power, for example, by being socially conferred (Blader & Chen, 2012)– an individual only enjoys status to the extent that others, such as group members, afford it. It is thus, subjective, and shaped by others’ assumptions and expectations about what skills, characteristics or behaviors warrant high or low status (Berger,

Cohen, & Zelditch, 1972; C. Ridgeway, 1982). An individual's status in a group is also relative or contextually defined in the sense that it is dependent on who else is in the group, and on the congruence between his or her personal characteristics, and those considered valuable by that particular group, in that specific context (Anderson et al., 2001). The result is a status-based rank-ordering of team members such that they afford higher status – and, consequently, greater control and responsibility over the team processes and decisions – to those who are perceived to exhibit the characteristics and behaviors associated with greater potential to contribute to the group's task or goals, and lower status to those who appear to exhibit less so (Berger et al., 1972; Bunderson, 2003; Magee & Galinsky, 2008). The resulting status hierarchy then plays a key functional role in groups, allowing members to distribute tasks and decision making influence in a coordinated fashion, which ultimately facilitates the group's performance (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Halevy, Chou, & Galinsky, 2011).

Over the last couple of decades, organizational-behavior and social psychology scholars studying social hierarchies have dedicated much attention to understanding the antecedents of status, such as the personal characteristics and interpersonal interactions that tend to result in high or low status attributions (Anderson et al., 2001; Anderson & Kilduff, 2009a), and its consequences, including behavioral differences and benefits from attaining high or low status (e.g.: Belliveau, O'Reilly, & Wade, 1996; Berger, Fisek, Norman, & Wagner, 1998; Pettit & Sivanathan, 2012). Much of this research, however, has studied status from a relatively static perspective, where team hierarchies are considered in isolation of each other, and assumed to be stable over time. While recent research has begun exploring changes in rank (Bendersky & Shah, 2012; Marr & Thau, 2014; Pettit, Sivanathan, Gladstone, & Marr, 2013; Pettit, Yong, & Spataro, 2010), most of this work is still largely focused on movement within the same group.

The research work contained in this dissertation stems broadly from a suspicion that people's experience of status is, in reality, much more rich, complex, and dynamic than this extant literature would suggest. The thought exercise I invited you to consider in the beginning of this section may have already led you to question whether your experience of status across apparently unrelated groups may interact in some interesting ways. Additionally, in today's global and interconnected world, and with organizations moving towards more cross-functional and flexible structures, a single individual is increasingly likely to work across multiple groups at the same time (O'Leary, Mortensen, & Woolley, 2011), each of which may entail distinct expectations and goals, and include diverse members. As individuals rotate from interacting with one group to another, they may find that their experience and skills render them with very different levels of status across contexts, and they are left juggling across multiple status hierarchies with potentially discrepant expectations.

The present dissertation examines this dynamic and multi-faceted experience of status across groups by drawing attention to the broader status context that individuals bring with them to the team. I posit that individuals' behavior and experience of status in a group is shaped not only by that specific hierarchy, but also by the range of status experiences and expectations formed across other groups to which they belong. The dissertation is composed of a set of papers that investigate this proposition from three different perspectives: 1) testing how the level of status that an individual experiences in one group can "spill over" and influence self-perceptions, behavior, and status judgments by peers in other unrelated groups; 2) analyzing how status variance – the extent to which one's status level varies across the different groups one belongs to – affects individuals both intra- and interpersonally; and 3) exploring how the cultural context

that team members bring with them can generate status disagreement within the team and ultimately impact team performance.

In the first chapter – *How status in one group influences perceptions and behavior in other groups* – I explore how the level of status individuals experience in one group can “spill over” and influence another unrelated group, over and above their status in the present context. I do so by testing how gaining, losing or maintaining relative status as individuals switch from interacting with one group to another impact self-perceptions and behavior, as well as the status they are afforded by their team members. Across four studies, including a large-scale group experiment in the lab, I find overall evidence that indeed participants’ status level in the first group was a significant predictor over and above the status level in the second group. Furthermore, I find that gaining, losing, and maintaining relative status affect the outcome measures differently, suggesting there are distinct psychological mechanisms at play behind each of those experiences. These findings contribute to the literatures on social hierarchies and group dynamics in several ways. It adds an important new perspective, for example, to the growing research on the dynamic nature of status (Bendersky & Pai, 2018; Bunderson & Van der Vegt, 2018) by analyzing changes specifically across distinct groups. Much of this recent work has focused on how team members’ status assessments are influenced by the future momentum expectations they form by observing someone’s recent status trajectory (Pettit, Doyle, Lount, & To, 2016; Pettit, Sivanathan, Gladstone, & Marr, 2013; Pettit et al., 2010). By purposefully designing the study such that there were no repeated members between the two groups, I ensured that team members did not know what status role other individuals were coming from. As such, evidence of the previous status level affecting team members’ status ratings is entirely

attributable to differences in how the individual actually behaved in the team, and not by any inferences about past or future progression.

The second chapter – *Status Variance: Variance in status across groups decreases well-being but improves perspective-taking* – co-authored with Alison Wood Brooks, brings attention to the range of groups individuals belong to across their personal and professional lives (O'Leary et al., 2011). It assesses how individuals' aggregate experience of status across groups can impact them both intra- and interpersonally. We introduce the concept of status variance to the research on social hierarchies in teams, defining it as the degree to which an individual's status level varies across the different groups he or she belongs to. Across five experimental and survey studies, we find both correlational and causal evidence that status inconsistency harms well-being but improves perspective-taking. These results contribute to advancing the literatures on social hierarchies and groups, in particular by suggesting that, in order to understand how status influences how individuals see themselves and relate to others, the literature must consider not only their static, or even dynamic, status level within one group, but also the aggregate experience of their status levels across multiple groups.

The third chapter in this dissertation – *Do we see the same hierarchy? Status disagreement in multicultural teams and its consequences for team Performance* – co-authored with Sujin Jang, explores how the cultural context that individuals bring with them to the team can shape the status hierarchy dynamics. More specifically, it develops and tests a theory of how status disagreement - differing perceptions among team members about who has how much status - emerges in multicultural contexts and ultimately harms team performance. We extend recent work that has begun challenging the prevalent assumption of status consensus in teams (Bendersky & Hays, 2017; Kilduff, Willer, & Anderson, 2016) by considering how team

members' different cultural beliefs inform status attributions (Torelli, Leslie, Stoner, & Puente, 2014). We develop a model of the impact of status disagreement, including its antecedents and consequences, mechanisms and moderators. Testing our hypotheses using data from 783 multicultural teams (4,174 participants) collaborating over the course of eight weeks reveals overall support for our model. We discuss important contributions to the literatures on social hierarchy and cross-cultural diversity in teams, namely how we advance understanding of the characteristics and challenges multicultural teams face by identifying status disagreement as a prevalent and important feature of status hierarchies in this context. We also demonstrate how, and under what conditions, status disagreement harms team performance, enriching our understanding of the functional role of status.

CHAPTER 1.

STATUS SPILLOVER: HOW STATUS IN ONE GROUP INFLUENCES  
PERCEPTIONS AND BEHAVIOR IN OTHER GROUPS

Catarina R. Fernandes

*Harvard Business School*

## Abstract

This research explores how moving between groups where individuals hold different status levels can influence subjective interpretation of their own status, as well as their behavior and group members' status judgments. I advance two pairs of competing hypotheses, suggesting that gaining and losing status may lead to either anchoring on their previous status level, or overshooting the extent to which their status actually changed. I find evidence that indeed individuals holding the same objective level of status experience it differently depending on whether they come from groups where they held higher or lower status (Study 1). In particular, status losers anchor on their prior higher level and underestimate how much status they actually lost, and status gainers overshoot their interpretation of the change in status and overestimate how much status they actually gained. I also find evidence for the mediating role of self-esteem in status losers' overestimated self-perceptions of status, but not for the role of optimism in status gainers' status perceptions (Study 2). Gaining and losing status seems to have consequences beyond self-perceptions, with evidence that status gainers perform worse than status losers (Study 3). A group lab study designed to allow participants to interact with one another in person and establish a status hierarchy finds further evidence that status can "spill over" between groups, affecting status self-perceptions, speech behavior, and status judgments formed by team-members (Study 4). I discuss the theoretical and practical implications of these findings.

## **Status Spillover: How Status In One Group Influences Perceptions And Behavior In Other Groups**

An individual's status in a group is a function of his/her drive and interpersonal abilities, as well as the congruence of his/her personal characteristics with those considered valuable by that particular group, in that specific context (Anderson et al., 2001). The status hierarchy that naturally emerges in groups informs the expectations each individual has regarding the behaviors and degree of influence they will be allowed to display. For instance, higher status members tend to speak more and more assertively, to interrupt others, to display more dominating cues, and to expect their opinion to significantly influence the decision outcome (Anderson & Kilduff, 2009b).

Given the contextually defined nature of status, we should expect variance in the status level a particular individual enjoys across the various groups and organizations to which he/she belongs. As an individual moves from one project or meeting to another, he/she is engaging with different groups, whose members may have different prestige and status levels relative to him/her. The same individual may thus enjoy a different degree of status across those various groups, as his/her relative standing is always dependent on that of the other specific group members. In that sense, an individual's ability to accurately realize when his/her relative status level changes from one group to another, and to adjust their behavior and expectations accordingly, is extremely important. Failing to appropriately adjust one's behavior to their relative status level can significantly harm group dynamics, with multiple group members competing for influence, constantly interrupting each other, and engaging in conflict, which can ultimately divert attention and effort away from the group's actual purpose and harm team performance (e.g.: Anderson, Srivastava, Beer, Spataro, & Chatman 2006; Bendersky & Hays, 2012).

Through the course of organizational life, individuals are likely to experience this sort of contrast between groups in which they hold different status levels. The groups individuals interact with change every time they switch jobs, are promoted, or accumulate responsibilities, for example, which often leads to a change in their relative status position within each of those groups. Even in the same day, as individuals go from a meeting with subordinates to a meeting with superiors, they are effectively moving from a group where they have high status to one where they have lower status. How do individuals experience these changes in status as they move from one group to another? Do they immediately adjust their behavior in each context to comply with others' expectations for their status rank? Or does the experience of change somehow alter their own self-perceptions of the status they hold, creating a misalignment between how they see themselves and behave, and the status others actually afford them?

Status researchers have traditionally focused on understanding the antecedents and consequences of status (e.g.: Anderson & Kilduff, 2009a; Pettit & Sivanathan, 2012), and while some recent efforts have begun exploring the effect of changes in rank within the same group (Bendersky & Shah, 2012; Marr & Thau, 2014; Pettit et al., 2010), we still know very little about how the different status levels an individual experiences across these various groups might influence each other.

The present paper begins to look at this variation in status across the different groups an individual belongs to. In particular, it explores how moving between groups where individuals hold different status levels influences status self-perceptions, behavior, and status judgments from others. The prevailing consensus in the literature suggests that individuals are highly accurate in assessing their own status (Anderson, Ames, & Gosling, 2008). Any misalignment between group members' status self-perceptions and the status their peers actually afford them

can be very destabilizing for the group dynamic and processes, leading to potential status conflict and misunderstandings regarding the roles and responsibilities of the different team members that can harm decision-making and ultimately group performance (Anderson et al., 2006; Bendersky & Hays, 2012). It is thus especially important, from both theoretical and practical perspectives, to understand whether and how experiencing status changes between groups can lead to biased perceptions of one's own status, and subsequently affect behavior and others' status judgments.

### **Theoretical Background And Hypotheses**

One of the strongest human motivations, driven by our inherently social nature, is the motivation to “strive for superiority”, to strive for status (Anderson et al., 2001). Indeed, hierarchies seem to naturally develop and persist across all kinds of social groups, including peer groups, neighborhood communities, athletic teams, and work organizations (Anderson et al., 2001). In these contexts, status level is determined by the prestige, respect, and esteem an individual enjoys in the eyes of other group members (Anderson & Kilduff, 2009a), and is thus rooted in the evaluations of others through conferral processes (Blader & Chen, 2012). Importantly, despite its subjective nature, there tends to be a high degree of consensus among group members of the individuals' positions in the status hierarchy (Anderson et al., 2006; Magee & Galinsky, 2008).

Status researchers have traditionally focused on understanding the antecedents of status, such as personal characteristics and interpersonal interactions that tend to result in high or low status attributions (Anderson et al., 2001; Anderson & Kilduff, 2009a), and its consequences, including behavioral differences and benefits from attaining high or low status (e.g.: Belliveau et

al., 1996; Berger et al., 1998; Pettit & Sivanathan, 2012). Individuals high in trait dominance, for example, who typically behave in assertive, forceful, and self-assured ways, tend to attain more influence and higher status because those behaviors are interpreted by team members as signals of competence (Anderson & Kilduff, 2009b). Research on the consequences of status has found that high status individuals tend to perceive others' intentions as being more positive and, consequently, to trust others more (Lount & Pettit, 2012), to approach subordinates at interpersonal distances that indicate intimacy (Dean, Willis, & Hewitt, 1975), and to tease, doing so in more hostile ways (Keltner, Capps, Kring, Young, & Heerey, 2001). They also report hearing applause and seeing facial expressions, in reaction to their performance, as louder and more favorable (Pettit & Sivanathan, 2012), and in general expect to accrue more rewards than those occupying lower-status positions (Berger et al., 1998). Most of these studies, though, have dealt with the status construct in a relatively static fashion, assuming status positions are stable over time (e.g.: Magee & Galinsky, 2008), focusing on identifying the factors that lead to stable levels of high or low status, and comparing how high and low status individuals differ in their behavior.

An individual's status in a group, however, is about their relative standing, and is thus dependent on who else is in the group. Also, as mentioned earlier, it is typically a function of the individuals' drive and ability to attain status in interpersonal settings, along with the congruence of their personal characteristics with those considered valuable by that particular group, in that specific context (Anderson et al., 2001). Given this contextually defined nature of status, we can thus expect variance in the extent to which individuals enjoy higher or lower status across the various groups and organizations to which they belong. Additionally, some research suggests status mobility might occur even within the same group, which raises questions for the long held

assumption of status stability. For example, if the performance requirements in a group change such that the criteria by which competence is assessed becomes inconsistent with the existing hierarchy, this hierarchy may become delegitimized and a new one may form (Berger et al., 1998; Neeley & Dumas, 2016).

### **Reactions to Status Changes**

Some status scholars have recently begun shifting their attention towards understanding this potentially more dynamic nature of status. Pettit, Yong and Spataro (2010), for example, tested individuals' reactions to the prospect of gaining or losing status. They found that individuals attach greater value to status when recalling the risk of losing it than when recalling the potential for gaining it, and are willing to pay more to avoid a status loss than to achieve a status gain. Neely (2013) found that individuals who lost status or gained anxiety about the state of their status, were less able to self-assess their skills and relative social value within organizational contexts. In fact, those who had higher status but were now at risk of losing it, saw a decrease in their abilities to perform. Marr and Thau (2014) compared how status loss is experienced by high and low status individuals. They found that high status individuals experience more self-threat than low status individuals and, consequently, have more difficulty performing well after losing status. In another study, Bendersky and Shah (2012) explored the performance effects of students' status gains and losses over time, finding evidence for a tradeoff between performance and status attainment. Their results suggest that people might overinvest in increasing assertive communication and generosity as means through which they expect to gain status, to the detriment of their own performance.

These recent efforts have begun to clarify the dynamic nature of status, but most of them have focused on exploring changes in rank within the same group. There is another source of

status variation, however, that has received significantly less attention – that which occurs across the different groups to which an individual belongs. This perspective is particularly important considering the various group contexts individuals inhabit in both their organizational and personal lives. In a pilot study where we asked Amazon Mechanical Turk participants to list up to 10 groups they currently belong to (there was no additional incentive related to the number of groups listed), they listed an average of 7 groups. There is an opportunity for individuals to experience changes in their relative status position every time they switch jobs, are promoted, or accumulating responsibilities, for example, which will generally involve a change in the groups individuals belong to. Even in the same day, an individual might engage with several of these groups, and as he/she goes from a meeting with subordinates to a meeting with superiors, he/she may effectively be moving from a context of high to one of low status. Similarly, a woman in a traditional and hierarchical family context who at the same time holds a leadership role professionally, might experience a daily exchange between being high status at work and lower status at home.

If the experience of status change were to alter individual's own self-perceptions of the status they hold, and consequently their behavior, it would result in a misalignment between how they see themselves and behave, and the status others actually afford them. This potential misalignment may have critical consequences for group dynamics, as it can destabilize the social order, coordination and predictability that usually come from a consensual social hierarchy (Kilduff, Willer, & Anderson, 2016). Overestimating one's status, for example, can instigate conflict and disorder in a group if the individual fails to defer to those who actually have higher status, or attempts to speak more frequently and behave more assertively than the group expects them to (Anderson et al., 2006). Underestimating one's status can also be destabilizing to a group

if individuals fail to perform the leadership-related behaviors and to contribute towards the decision-making process as the group is expecting, although the impact on social desirability and on group functioning is likely to be less severe (Anderson et al., 2006).

### **Anchoring and Overshooting Effects**

How, then, does moving from a context where individuals hold high status to one where they hold lower status (and vice-versa) influence their self-perceptions of their current status? Do they remain anchored on their previous status level, or instead do they overestimate how much status they actually gained or lost? I advance two competing predictions to describe these potential outcomes: an anchoring and an overshooting effect. It is important to add that the experiences of losing and gaining status are psychologically distinct – one is rewarding and the other aversive – and so I expect different mechanisms to influence subsequent self-perceptions of status. This means that status loss and gain may result in anchoring and overshooting effects differently.

#### *Anchoring Effect*

One prediction, which I call the anchoring effect (see Figure 1), is that the previous status level has a lingering effect such that, when moving from a high to lower level of status, individuals' interpretation of their current status level is anchored by the previous higher status experience, leading them to overestimate how much status they have in the new context. Conversely, moving from a low to higher level of status would lead them to anchor their interpretation of their current status level on their previous lower status experience, leading them to underestimate how much status they have in the new context.

The ease of recall bias, which keeps recent thoughts and intuitions salient beyond the period in which they are warranted (Bazerman & Moore, 2013), is an example of a process that

is likely to fuel this force. Positive illusions lend further support to anchoring among status losers such that the motivation to maintain self-esteem leads them to form an unrealistic, positive perception of how much status they are being afforded in the new context (R. F. Baumeister, 1982; Pfeffer, Cialdini, Hanna, & Knopoff, 1998). In fact, positive illusions seem to be especially useful when an individual receives negative feedback or is otherwise threatened, as is the case when they lose relative status, and may be especially adaptive under these circumstances (Taylor & Brown, 1988). Pettit and colleagues (2013) also found that individuals judging status changes within a group pardoned themselves the status tax they levied on others for a descent, presumably due to their motivation to protect the integrity of the self (R. F. Baumeister, 1998; Kunda, 1990). As for status gainers, an anchoring effect from their part might also be partly explained by the fundamental human need to belong and be included in social groups (R.F. Baumeister & Leary, 1995). Given their recent experience of being low status, they are likely in more of a risk-averse state-of-mind (Anderson & Galinsky, 2006), and might thus err on the side of being cautious and avoid the risk of social exclusion that would come from over-perceiving one's own status.

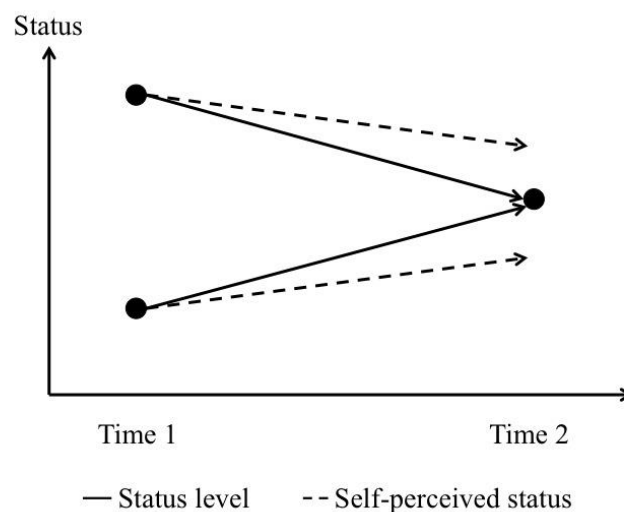


Figure 1: Anchoring Effect

### *Overshooting Effect*

An alternative prediction, which I call the overshooting effect (see Figure 2), is that individuals overestimate the magnitude of their change in status such that, when moving from a high to lower level of status, individuals perceive their status as having decreased even more than it actually did, leading them to underestimate how much status they have in the new context. Conversely, someone moving from a low to higher level of status would perceive their status as having increased even more than it actually did, leading them to overestimate how much status they actually have in the new context.

Several arguments lend support to an overshooting effect among status losers. Prospect theory's tenet of loss aversion (Kahneman & Tversky, 1979), for example, would suggest that moving from a high to lower status level is so psychologically aversive that it could cause individuals to experience their present status as being even lower than it actually is. Losing status, especially for those high in status, can be self-threatening (Marr & Thau, 2014), and increase heart rate (Scheepers, Ellemers, & Sintemaartensdijk, 2009) and anxiety (Neeley, 2013); so much so that people are willing to pay considerable amounts to avoid losing it (Pettit et al., 2010). All of these physiological and psychological reactions to status might compound the individuals' negative attitude towards the change in status, thus leading him/her to overestimate how much status they actually lost. Conversely, the psychological experience of gaining status can be so rewarding that it might also compound the individuals' positive attitude towards the change, in this case leading him/her to overestimate how much status they actually gained. The positive feedback in the form of an increase in status is likely to fuel optimism, which would lead to bias in the individuals' own assessment of their actual performance and opportunities (Metcalfe, 1998). Indeed, individuals do seem to afford themselves a status premium for

ascending the hierarchy, mostly due to expectations of further progression in the future (Pettit et al., 2013).

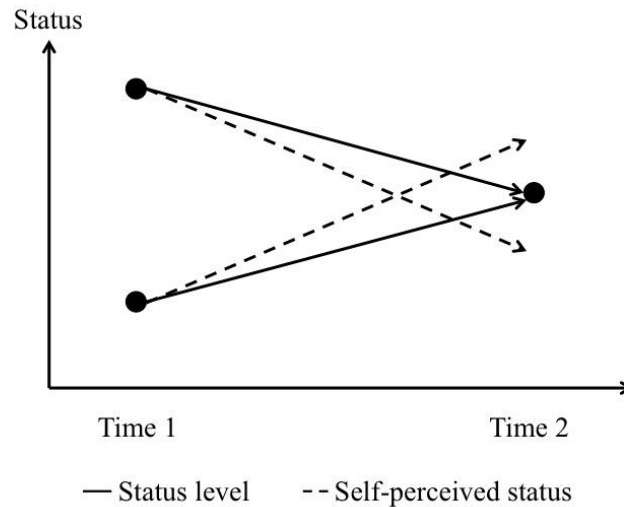


Figure 2: Overshooting Effect

Following the description of the anchoring and overshooting effects, I thus advance the following two pairs of competing hypotheses:

*H1a: Moving from a group with higher status to one with lower status leads individuals to anchor, such that their self-perceived status is higher than that of someone who remained constant at the final status level throughout*

*H1b: Moving from a group with higher status to one with lower status leads individuals to overshoot, such that their self-perceived status is lower than that of someone who remained constant at the final status level throughout*

*H2a: Moving from a group with lower status to one with higher status leads individuals to anchor, such that their self-perceived status is lower than that of someone who remained constant at the final status level throughout*

*H2b: Moving from a group with lower status to one with higher status leads individuals to overshoot, such that their self-perceived status is higher than that of someone who remained constant at the final status level throughout*

## **Overview Of The Present Research**

Study 1 tests hypotheses 1a-2b by comparing the self-perceived status of individuals who are presently at the same status level, but where they have either remained at that same final status level throughout, or they have reached their current standing through a loss or an equal sized gain in status. In Study 2, I explore the role of optimism and self-esteem as potential mediators, and in Study 3 I look at the consequences of status change on individual performance. In Study 4, I extend the paradigm with a lab group study in which participants interact with one another in teams, increasing the saliency of the social conferral nature of status, and allowing me to capture round-robin status ratings and patterns of behavior in the team.

### **Study 1**

In Study 1, I tested hypotheses 1a-2b by comparing the psychological experience of individuals who were presently at the same status level, but where they had either remained at that same final status level throughout, or they had reached their current standing through a loss or an equal sized gain in status. The former represented the reference point – the choices we would expect individuals to make if they had not experienced any change in status between groups. The other two represented the status losers and gainers, respectively. Although all participants held the same objective final status level (i.e., they would have been afforded the same status level by group peers), I expected them to express different subjective assessments of

what they actually experienced their status level to be, depending on whether they had reached their current standing through a gain or loss in status.

## **Method**

159 participants were recruited on Amazon Mechanical Turk and randomly assigned to one of three conditions that determined the status level they would be exposed to initially and subsequently: high-average, average-average, or low-average. Initial status level (Time 1) was manipulated by having participants read a scenario (see Appendix A) in which they imagined being a salesperson who had been ranked by colleagues, bosses, and clients in regards to their status and influence. Depending on the condition, they were told their status ranking relative to the other salespeople selling their product was highest, average, or lowest, and were shown a bar graph to illustrate the distribution and their relative position. They were then asked to “Please write at least 5-6 lines about how you think you would feel. Describe the emotions, expectations and fears you imagine you would have” (Galinsky, Magee, Inesi, & Gruenfeld, 2006).

After completing a manipulation check asking participants to rate on a 7-point scale how much respect, prestige, and status they felt they had (Anderson et al., 2001), they were exposed to a second scenario (see Appendix B) manipulating their subsequent status level (Time 2). They imagined that it was now a year later and they had again been subject to the same status ranking process. This time, across all conditions, participants were told their relative ranking position was average and shown a bar graph illustrating their relative position, and were again asked to “Please write at least 5-6 lines about how you think you would feel. Describe the emotions, expectations and fears you imagine you would have”. The distance in the bar graph between the highest and the average status positions was equivalent to the distance between the lowest and the average status positions.

To measure the participants' self-perceived status after the Time 2 manipulation, I again collected 7-point scale ratings of how much respect, prestige, and status they felt they now had.

## Results

### *Manipulation check*

The average of the respect, prestige, and status ratings after the Time 1 manipulation ( $\alpha = .980$ ) indicated the extent to which the scenario manipulated the intended initial high, average or low status level. We conducted a one-way ANOVA and planned contrasts to determine the effectiveness of the initial status (Time 1) manipulations,  $F(2, 157) = 416.31, p < .001$  (see Figure 3). As expected, I found that participants in the high-average condition ( $M = 6.30, SD = .83$ ) felt they had significantly higher status than those in the average-average condition ( $M = 3.46, SD = .98$ ),  $t(223) = 15.00, p < .001$ , and in turn those in the low-average condition ( $M = 1.71, SD = 1.31$ ) felt they had significantly lower status than those in the average-average condition,  $t(223) = -9.22, p < .001$ .

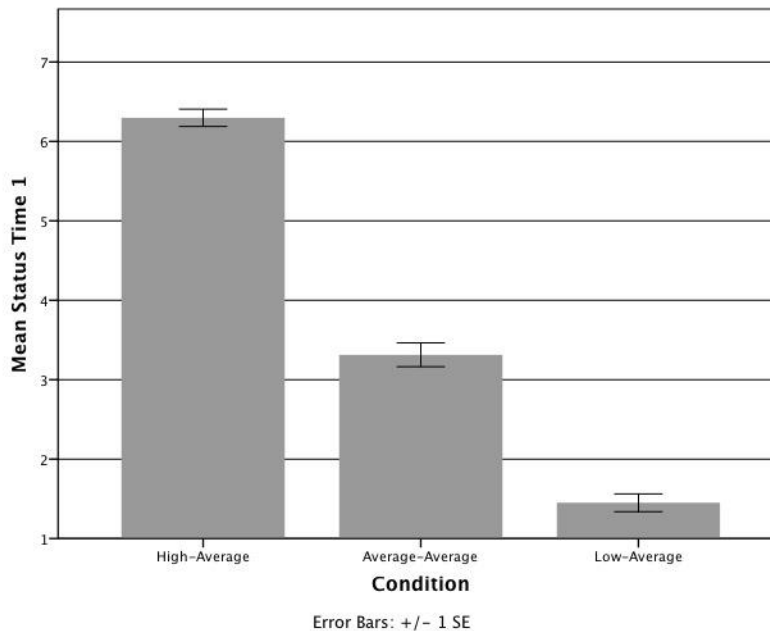


Figure 3: Study 1 Manipulation Check

### *Self-perceived status*

The average of the respect, prestige, and status ratings after the Time 2 manipulation ( $\alpha = .940$ ) captured the participants' self-perceived status following the change in status. To compare how losing, gaining and maintaining status influenced participants' subjective experience of their current status level at Time 2, I conducted a one-way ANOVA of self-perceived status across the three conditions,  $F(2, 157) = 19.39, p < .001$  (see Figure 4). Although all participants were objectively at the same level of status (average) at Time 2, there was a significant difference in self-perceived status across the three conditions, such that the participants who gained status (low-average condition;  $M = 4.25, SD = .92$ ) reported the highest self-perceived status, followed by those who lost status (high-average condition;  $M = 3.53, SD = .97$ ), and then those who had remained at the same average status level throughout (average-average condition;  $M = 3.03, SD = 1.16$ ). In particular, the difference between the low-average and high-average condition was significant,  $t(157) = 3.77, p < .001$ , and the difference between the high-average condition in turn and the average-average condition was also significant,  $t(157) = 2.49, p = .014$ .

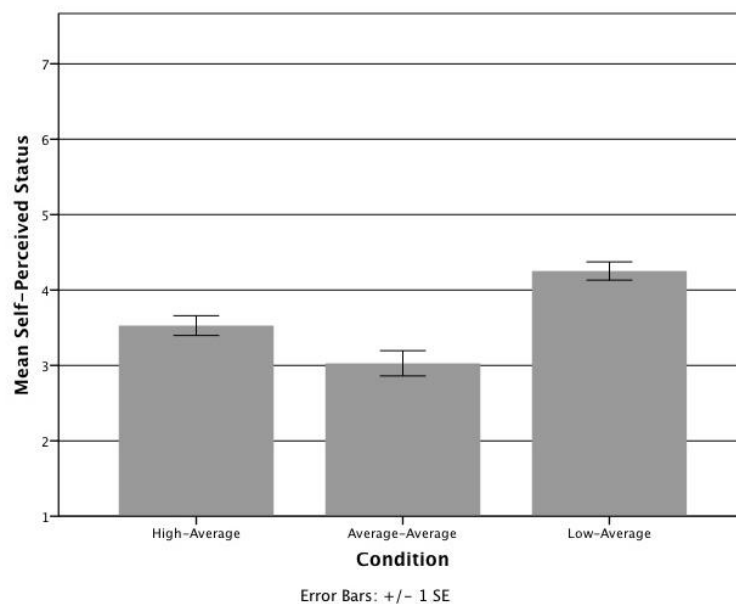


Figure 4: Study 1 Self-Perceived Status

## **Discussion**

The results suggest that, despite being at the same objective status level, individuals who reached their current position by gaining status, experience their standing as being significantly higher than individuals who reached the same position through an equal-sized status loss. Furthermore, both of these participants, those who gained and those who lost status, report self-perceived status levels that are significantly higher than those who did not go through a status change and instead maintained the average status level throughout. In support of Hypothesis 1a, I thus found that participants who lost status exhibited an anchoring effect, such that they interpreted their new status as having decreased less than it actually did, which resulted in an overestimation of their current status standing. Conversely, in support of Hypothesis 2b, I found that participants who gained status exhibited an overshooting effect such that they interpreted their new status as having increased more than it actually did, and thus also overestimating their current status standing. Although both status gainers and losers ultimately overestimated their status levels, one was overshooting their actual gain and the other was anchoring on their prior status level, suggesting that different mechanisms may be at work. Study 2 seeks to explore two of these possible mechanisms.

## **Study 2**

In Study 2, I sought to test two possible mechanisms underlying the anchoring and overshooting effects found in Study 1. The experience of gaining and losing status are psychologically distinct – one is rewarding and the other aversive – and so I expect different mechanisms to be driving each of the two effects identified. In the case of those who gain status, the overshooting effect observed may, as argued above, be the result of optimism fueled by the

positive feedback received in the form of an increase in status (Metcalf, 1998). The first hypothesis (Hypothesis 3) is thus that optimism mediates the relationship between gaining status and the subsequent self-perception of status. In the case of those who lose status, also as argued above, the observed anchoring effect may be due to the role of positive illusions. More specifically, the motivation to maintain self-esteem may be what is leading status losers to form an unrealistic, positive perception of how much status they are being afforded in the new context (R. F. Baumeister, 1982; Pfeffer et al., 1998). The second hypothesis (Hypothesis 4) is thus that state self-esteem mediates the relationship between losing status and the subsequent self-perception of status.

## **Method**

133 participants were recruited on Amazon Mechanical Turk and randomly assigned to the same three conditions as Study 1: high-average, average-average, or low-average. Status level at both Time 1 and Time 2 was induced using the same manipulations from Study 1, and the manipulation check and self-perceived status were also measured following the same procedure. After the self-perceived status items, all participants then completed an optimism (Weinstein, 1980) and a state self-esteem (Heatherton & Polivy, 1991) scale (the order of which was randomly determined).

## **Results**

### *Manipulation check*

Following the same procedure as in Study 1, the manipulation check measure was captured by taking the average of the respect, prestige, and status ratings after the Time 1 manipulation ( $\alpha = .984$ ). One-way ANOVA and planned contrasts were used to determine the effectiveness of the initial status (Time 1) manipulations,  $F(2, 130) = 220.85, p < .001$ . As

expected, I found that participants in the high-average condition ( $M = 6.30$ ,  $SD = .83$ ) felt they had significantly higher status than those in the average-average condition ( $M = 3.46$ ,  $SD = .98$ ),  $t(130) = 12.59$ ,  $p < .001$ , and in turn those in the low-average condition ( $M = 1.71$ ,  $SD = 1.31$ ) felt they had significantly lower status than those in the average-average condition,  $t(130) = -7.63$ ,  $p < .001$ .

### *Self-perceived status*

Participants' self-perceived status was measured as in Study 1, by the average of the respect, prestige, and status ratings after the Time 2 manipulation ( $\alpha = .939$ ). I conducted a one-way ANOVA of self-perceived status across the three conditions,  $F(2, 130) = 11.02$ ,  $p < .001$  and, replicating the results from Study 1, once again found that the participants who had reached the average status level through a gain (low-average condition;  $M = 4.24$ ,  $SD = .89$ ) expressed a self-perceived status that was significantly higher than those who had reached the same average status level through a loss (high-average condition;  $M = 3.65$ ,  $SD = 1.08$ ),  $t(130) = 2.70$ ,  $p = .008$ . Also consistently with the findings from Study 1, the high-average condition participants, in turn, expressed a self-perceived status that was significantly higher than those who had remained at the same average status level throughout the two time periods (average-average condition;  $M = 3.17$ ,  $SD = 1.21$ ),  $t(130) = 2.09$ ,  $p = .039$ .

### *Optimism*

To test Hypothesis 3 – whether optimism mediated the relationship between status gain and self-perceived status – I followed Hayes and Preacher's (2014) advice for mediation testing with a categorical independent variable. I dummy coded the three conditions (high-average, average-average, and low-average) into two variables, where average-average was the reference category (see Figure 5). The first model,  $F(2, 130) = 11.02$ ,  $p < .001$ , with only the two dummy

coded variables (*High-Ave*, comparing the high-average to the average-average condition, and *Low-Ave*, comparing the low-average to the average-average condition) confirmed my previous finding, that the self-perceived status level of participants in the high-average condition was significantly higher than that of the participants in the average-average condition,  $t(130) = 2.09$ ,  $p = .039$ , as was that of participants in the low-average condition,  $t(130) = 4.67$ ,  $p < .001$ . When the optimism variable was added to the model,  $F(3, 129) = 8.59$ ,  $p < .001$ , it only influenced self-perceived status marginally,  $t(129) = 1.82$ ,  $p = .07$ , and it did not reduce the significance of the dummy variable comparing the low-average to the average-average condition (*Low-Ave*) as predicted,  $t(129) = 4.62$ ,  $p < .001$ . Hypothesis 3 was thus not supported.

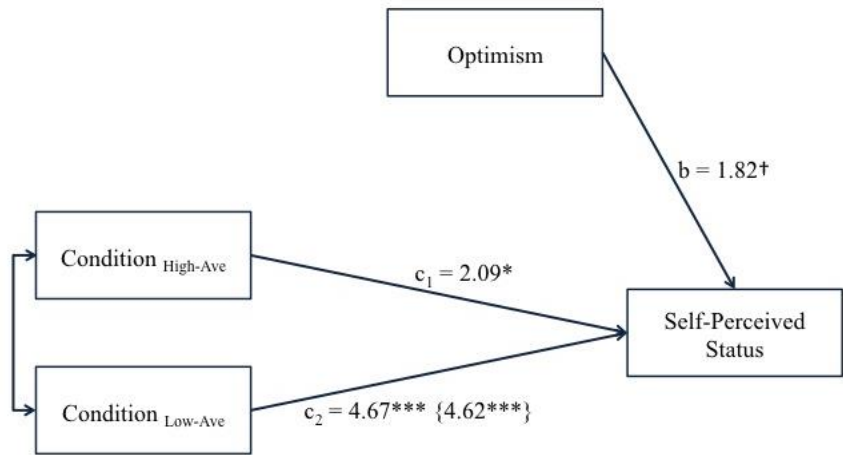


Figure 5: Study 2 Optimism Mediation Model

*State Self-Esteem*

We followed the same procedure to test Hypothesis 4 – the potential mediating role of state self-esteem in the relationship between status loss and self-perceived status (see Figure 6). First, the relationship between the dummy variable comparing the high-average and the average-average condition and the state self-esteem variable was significant,  $t(130) = 2.28$ ,  $p = .024$ ,

suggesting that the participants who lost status exhibited higher state self-esteem than those who remained at the average status level throughout. When state self-esteem was added to the model with the two dummy coded condition variables described in the previous section,  $F(3, 129) = 10.91, p < .001$ , it did significantly influence self-perceived status,  $t(129) = 3.05, p = .003$ , and it also reduced the significance of the coefficient for the dummy variable comparing the high-average and the average-average condition, which became non-significant,  $t(129) = 1.51, p = .13$ , confirming the mediation path. Hypothesis 4 was thus supported.

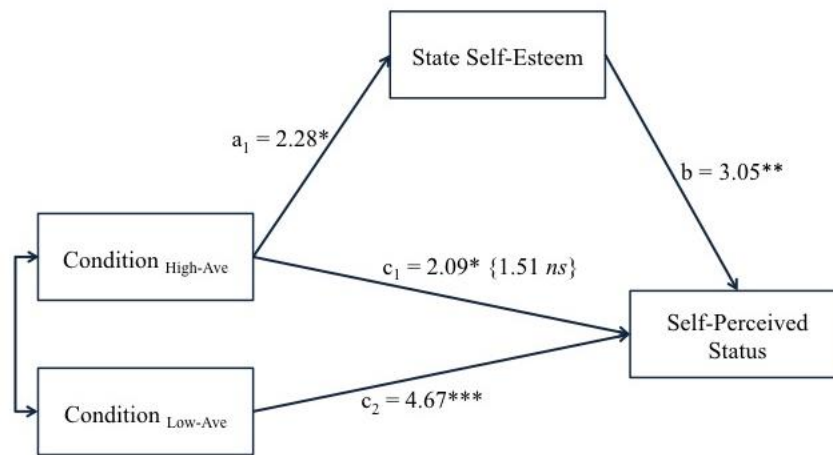


Figure 6: Study 2 State Self-Esteem Mediation Model

## Discussion

Study 2 replicated the main effect found in Study 1, that individuals who gain status experience their position as being higher than individuals who lost status, and that these in turn perceive their position to be higher than individuals who maintained the same status level throughout, despite the fact that all three conditions are at the same final objective status level. Regarding the effort to identify potential mechanisms for these patterns, I did not find support for Hypothesis 3 that optimism helps explain why individuals gaining status overestimate their

current status relative to individuals whose status doesn't change. I did, however, find support for Hypothesis 4 and the mediating role of state self-esteem in explaining why individuals who lose status anchor their current status at a higher level than individuals whose status doesn't change. As hypothesized, individuals in the high-average condition expressed significantly higher self-esteem than those in the average-average condition, and that this in turn contributed to the high-average participants overestimating their status at Time 2. Part of the mechanism thus seems to be that, despite decreasing in status, the participants who experience status loss still have stronger self-esteem than those participants who remained at the average status level throughout, apparently because they are still anchored in their previous stronger position.

### **Study 3**

In Study 3 I wanted to test if, apart from influencing perceptions of one's actual status level, the experience of gaining or losing status would also influence performance. Marr and Thau (2014) found that high-status individuals experienced more self-threat than lower status individuals when losing status, which interrupted information processing and led to worse performance. This would suggest that individuals losing status are likely to experience self-threat that can impair performance. Research on negative feedback also suggests that it can harm performance on tasks by stimulating distracting off-task thoughts (Kanfer & Ackerman, 1989) and increasing attention to the self instead of the task (Kluger & DeNisi, 1996). Assuming individuals interpret status loss as a form of negative feedback, this lends further support to the suggestion that losing status is likely to harm performance. The first hypothesis (Hypothesis 5) is thus that moving from a group with higher status to one with lower status leads individuals to perform worse than someone who remained constant at the final status level throughout.

In the case of those who gain status, the enhanced self-perception and optimism from the increase in status can foster motivation, persistence, and ultimately, more effective performance (Taylor & Brown, 1988) relative to individuals who remained constant at the final status level throughout. Positive feedback, of which gaining status is presumably an example, also seems to improve performance (Kluger & DeNisi, 1996). Similarly, status gainers' increased confidence can lead to greater self-efficacy, further improving motivation and performance (Gecas & Seff, 1989; Stajkovic & Luthans, 1998). The second hypothesis (Hypothesis 6) is thus that moving from a group with lower status to one with higher status leads individuals to perform better than someone who remained constant at the final status level throughout.

## **Method**

160 participants were recruited on Amazon Mechanical Turk and, following the same procedure as in studies 1 and 2, they were randomly assigned to the high-average, average-average or low-average condition. The manipulation check and self-perceived status measures were captured in the same way as before, after which all participants were given a word-search puzzle and up to 10 minutes to list all the three or more-letter words they could find (Marr & Thau, 2014). I subsequently coded errors (i.e., words that had fewer than three letters, were not real words, or were not in the word search) and added the total numbers of errors each participant made.

## **Results**

### *Manipulation check*

As before, the effectiveness of the initial status manipulation was measured by taking the average of the respect, prestige, and status ratings after the Time 1 manipulation ( $\alpha = .976$ ), and tested with a one-way ANOVA,  $F(2, 158) = 326.59, p < .001$ , and planned contrasts. Once again,

I found that participants in the high-average condition ( $M = 6.45$ ,  $SD = .66$ ) felt they had significantly higher status than those in the average-average condition ( $M = 3.40$ ,  $SD = 1.22$ ),  $t(158) = 15.54$ ,  $p < .001$ , and in turn those in the low-average condition ( $M = 1.49$ ,  $SD = 1.09$ ) felt they had significantly lower status than those in the average-average condition,  $t(158) = 9.67$ ,  $p < .001$ .

### *Self-perceived status*

Participants' self-perceived status was again measured by the average of the respect, prestige, and status ratings after the Time 2 manipulation ( $\alpha = .939$ ). A one-way ANOVA of self-perceived status with the three conditions,  $F(2, 158) = 9.79$ ,  $p < .001$  indicated that the participants in the low-average condition ( $M = 4.00$ ,  $SD = 1.13$ ) once again perceived their status as being significantly higher than in the high-average condition ( $M = 3.15$ ,  $SD = 1.10$ ),  $t(158) = 3.65$ ,  $p < .001$ . Unlike the previous two studies, there was no significant difference between the participants in the high-average and average-average conditions ( $M = 3.06$ ,  $SD = 1.40$ ), but there was a significant difference in self-perceived status between the low-average and average-average condition  $t(158) = 3.99$ ,  $p < .001$ .

### *Performance*

To test hypotheses 5 and 6 on the differences in performance between individuals who didn't change status, and those who gained and lost status, I conducted a poisson regression with the count of errors as the dependent variable (Marr & Thau, 2014) (see Figure 7). Since the dependent variable counts for errors, a lower score indicates higher-quality performance. Very importantly, there were no differences across conditions in terms of time spent on the task,  $F(2,157) = .345$ , *n.s.*, nor quantity of words offered,  $F(2, 158) = 1.97$ , *n.s.*, which suggests that any subsequent differences were not due to variance in effort between conditions, but rather

variance in attention and proficiency in completing the assigned task. In terms of performance, there were no significant differences in number of errors between the average-average participants and the other two conditions, thus failing to provide support for either hypothesis 5 or hypothesis 6. Looking at the difference between the two change conditions, however, I found that the participants in the low-average condition ( $M = 1.20$ ,  $SD = 1.56$ ) made significantly more errors than the participants in the high-average condition ( $M = .67$ ,  $SD = 1.15$ ),  $b = -.59$ ,  $s.e. = .29$ ,  $p = .042$ . With both time spent on the task and quantity of words added to the model, apart from the condition dummy variables, quantity of words was a significant predictor of errors,  $b = .31$ ,  $s.e. = .04$ ,  $p < .001$ , and the difference between the low-average and high-average conditions became marginally significant,  $b = -.54$ ,  $s.e. = .29$ ,  $p = .061$ .

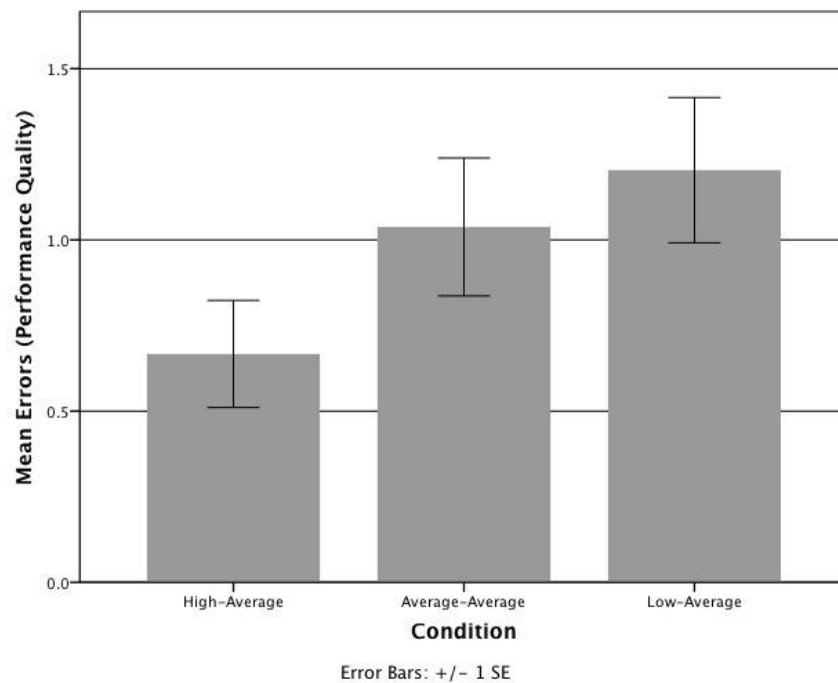


Figure 7: Study 3 Performance Quality

## **Discussion**

I could not find support for hypotheses 5 and 6, which suggests that neither gaining nor losing status lead to differences in performance relative to someone who remained at the final status level throughout. I did, however, find that status gainers made a significantly larger number of errors than status losers. This suggests that, contrary to the directional effects suggested in my hypotheses (since the reference point for both hypotheses was the same), gaining status actually leads to worse performance than losing status. Importantly, this difference was not driven by variance in effort, as there were no differences across conditions in terms of time spent on the exercise or quantity of words offered. One possible explanation for these results, which remains to be tested in future studies, is that the participants who gained status felt overconfident about their abilities, leading them to jump to unjustified conclusions, while those who lost status were more cautious and guarded, double-checking their work to avoid any risk of further status decreases.

## **Study 4**

In Study 4, I wanted to address the fact that the previous three studies relied exclusively on scenario manipulations that involved no actual social interaction. Study 4 was thus designed as a group lab study, allowing participants to interact and establish actual status hierarchies among themselves. This paradigm also allowed me to extend beyond the psychological impact of status changes and actually test for behavioral consequences and the effect on team members' status judgments.

## **Method**

Study 4 was designed as an experimental group study in the laboratory where I could manipulate participants' status levels in two sequential group activities in order to test the causal effect of changes in status on participants' behavior and status evaluations. During the course of the 90-minute study, participants worked on two subsequent group tasks, with entirely different group members in each of the two groups. For each group task, the participants were randomly assigned one of three roles that implied a high, medium or low status level, such that some participants experience high status in the first task and medium status in the second task, others experienced medium status in the first task and low status in the second task, and so on (for a total of 9 different combinations of status-level sequences).

The study provided several types of outcome variables by which I could subsequently assess the impact of status changes. Firstly, after each of the two group tasks, participants reported round-robin rating assessments of their own and each others' status, allowing me to calculate both self-perceived and received status ratings. Secondly, all participants wore a Sociometric Badge during the two group discussions (see Appendix C). These are tracking devices that users wear around their necks that measure airtime, speaking frequency and order, interruptions, voice intonation and volume, and other similar measures of status-related behavior. With these measures I was able to compare participants' airtime and speech patterns across conditions to see if and how the change in hierarchical role from one group to the other influenced their behavior.

### *Participants*

351 individuals between the ages of 18-27 (the age limit was imposed to minimize the effect of age as an external status characteristic and increase the relative salience of the

manipulated status distinctions) were recruited to come to the laboratory to participate in the 90-minute study in exchange for \$30 payment. The sessions were only conducted when 9 participants were present, as that is the minimum number that allows for groups of three to be formed for each group task without repeating group members between the two tasks (and there were only three breakout rooms available in the laboratory). Of the initial 351 participants, 27 failed attention checks imbedded in the surveys, and were thus excluded from the analyses due to uncertainty about the reliability of their responses. I did, however, confirm that all the results described below hold when I include the excluded 27 participants.

### *Procedure*

Participants were first guided to a computer room and asked to use one of the nine computer terminals. The pre-task survey randomly assigned each participant a number from 1-9 that determined his or her role and groups in the first and second group task. They were then informed they would be working on a group task where there are three different roles (President, Middle Manager and Junior Analyst), and told which role they would be playing in the first group (according to the initial random assignment). All participants were instructed to write their name on a colored badge they were to then stick to their chest. In order to visually distinguish each role, the Presidents were instructed to use a blue badge, the Middle Managers a green badge, and the Junior Analysts a yellow badge. The lab facilitator, blind to the study's hypotheses, then called the Presidents apart and handed them the Sociometric badges for their respective teams, explaining how they worked and asking them to subsequently distribute the badges among their team members. The Presidents were then assigned to their respective breakout rooms, given the option to choose how each team member would be seated around the table, and provided a marker and a large sheet of paper to stick on the wall in case they wanted to

use it during the group discussion. The Middle Managers were then called apart and given the paper folders with the instructions for the group task, which they were to subsequently distribute to their team members. Lastly, the Junior Analysts were asked to wait without further instructions until the President and Middle Manager had been briefed and assigned to their breakout room, at which point they joined their team members.

The instructions for the first group task – the Endowed Chair activity (Baker, D.F., 2010) - were distributed in role-determined color folders for each team member (again, blue for the Presidents, green for the Middle Managers and yellow for the Junior Analysts). Participants spent approximately 10 minutes reading their material individually, after which they spent another 15 minutes discussing the candidates in order to reach a decision as a group. Each group's President was instructed to fill in a response paper form with the group's decision.

Once the groups had completed their task, participants returned to their individual computer terminals to complete a set of questions about the first group activity, including 7-point scale ratings of the degree of status, respect, and prestige of each group member (Pettit & Lount, 2010), including themselves.

All participants were then informed they would be working on a second group task, with new group members, and that once again there were three different roles (President, Middle Manager and Junior Analyst). They were told what role they would be playing on this second group task, and the same procedures were followed as before, except that this time the groups completed the Subarctic Survival activity. The post-activity survey included the same status ratings as before, in addition to a set of questions about the group dynamics.

## *Measures*

The round-robin status ratings provided by each participant, evaluating both themselves and each of their team-members after the second group task, allowed me to test whether and how the status role participants experienced in the first group task affected them in the second group, over and above the effect of the status role they were actually assigned in the second group task. Importantly, all team members changed between the first and second group, and there was no indication of what status role participants had been assigned to in their previous group. Thus, any potential effect that the status role from the first group may have had on the status evaluations a participant received from his/her team-members in the second group task can be attributed to differences in behavior or contributions observable to the participant's team members, and not to inferences they may have formed about the participant's past or future status trajectory.

Two ordinal variables (task 1 status level and task 2 status level) were created to account for the three possible status levels in each of the two groups, coding as 1 the Junior Analyst role, 2 the Middle Manager Role, and 3 the President role.

Participants' self-perceived status was calculated by taking the average of their own assessment of their status, respect, and prestige ratings after the second group task ( $\alpha = .87$ ). Received status evaluations, in turn, were calculated by taking the average of the status, respect, and prestige ratings each participant received from his/her team-members after the second group task ( $\alpha = .85$ ), and then calculating the average of that aggregated score across all evaluating team-members.

The Sociometric badges use infrared and voice and motion detection to track users' airtime and speech patterns, measuring a set of behaviors that are likely to be shaped by the

status role the user finds him/herself in. Those most relevant for the purpose of this study are the user's total speaking time and volume.

## Results

### *Self-perceived status*

I ran a linear mixed-effects regression (with random effects for team to account for the hierarchical nature of the data) to test if participants' task 1 status level affected self-perceived status in group 2, controlling for task 2 status level. As hypothesized, I found that the task 1 status level significantly affects self-perceived status ratings in group 2, over and above the (also significant) effect of task 2 status level ( $b = -.263$ ,  $t(289) = -2.94$ ,  $p = .004$ ). More specifically, the effect of task 1 status level on self-perceived status is negative, suggesting that, at every level of status in task 2, having come from a higher status level in task 1 leads participants to perceive their own status in group 2 as lower. Figure 8 shows the mean self-perceived status ratings per condition.

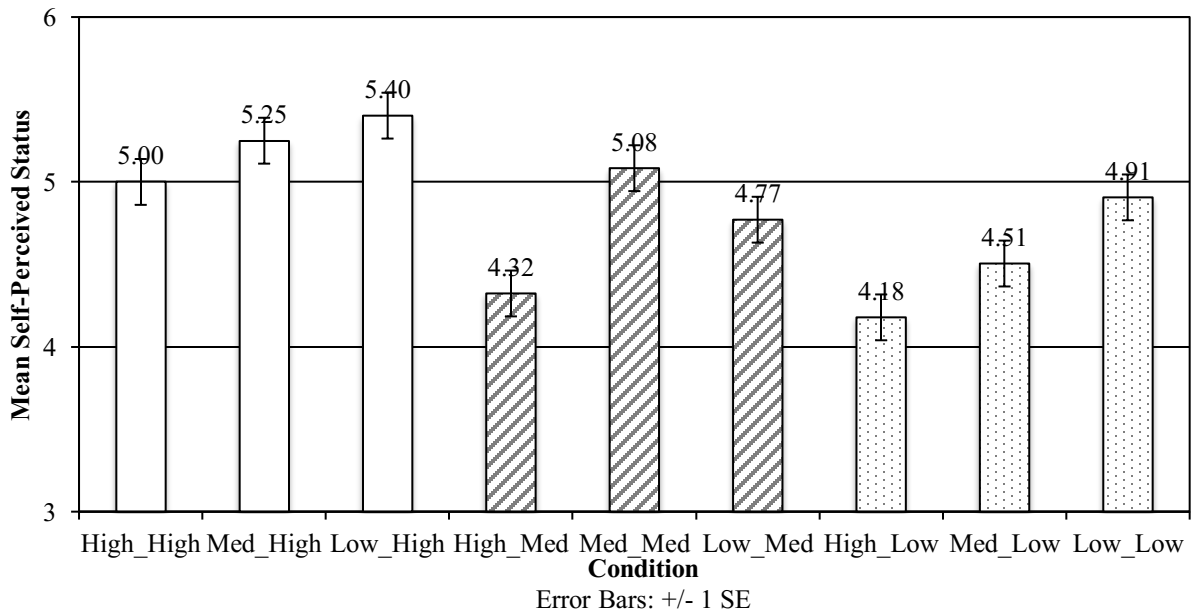


Figure 8: Study 4 Self-Perceived Status Ratings

*Received status ratings*

I ran another linear mixed-effects regression (again, with random effects for team) to test if participants' task 1 status level affected the status ratings they received from their team members in group 2, controlling for task 2 status level. As hypothesized, I also found that the task 1 status level significantly affects received status ratings in group 2, over and above the (also significant) effect of task 2 status level ( $b = .143$ ,  $t(289) = -2.53$ ,  $p = .012$ ). More specifically, the effect of task 1 status level on self-perceived status is positive, suggesting that, at every level of status in task 2, having come from a higher status level in task 1 leads participants to receive higher status ratings from their team members in group 2. Figure 9 shows the mean received status ratings per condition.

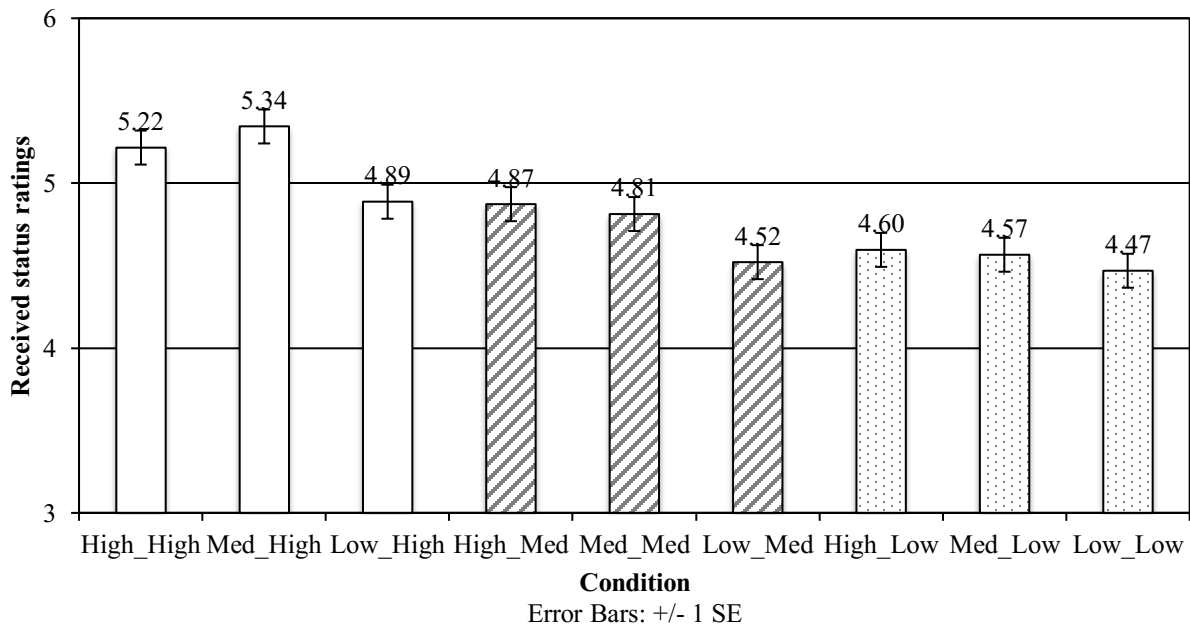


Figure 9: Study 4 Received Status Ratings

### *Speech behavior*

I ran a linear mixed-effects regression (random effects for team) to test if participants' task 1 status level affected the total speaking time in group 2, controlling for task 2 status level. The task 1 status level significantly affected total speaking time in group 2, over and above the effect of task 2 status level ( $b = 65.33$ ,  $t(135) = 2.65$ ,  $p = .010$ ). More specifically, the effect of task 1 status level on total speaking time is positive, suggesting that, at every level of status in task 2, having come from a higher status level in task 1 led participants to spend more time talking in group 2. Similarly, a linear mixed-effects regression (random effects for team) to test if participants' task 1 status level affected speaking volume in group 2, controlling for task 2 status level, I again find that task 1 status level is a significant predictor ( $b = .006$ ,  $t(135) = 2.51$ ,  $p = .027$ ).

### **Discussion**

Study 4 was designed to address the fact that the previous three studies relied exclusively on scenario manipulations that involved no actual social interaction, so important given the socially constructed nature of status. With the group study in the lab, participants were given the opportunity to interact in person with their team members, actually experiencing the manipulated status levels as opposed to merely imagining a scenario, and allowing them to establish an actual status hierarchy and evaluate both their own and each of their team-members' status. Additionally, participants wore Sociometric badges during the group activities, which measured total speaking time and volume, in a much more objective and reliable form than relying on self-reported perceptions of airtime, for example.

Across all three outcome measures from the second group task – self-perceived status ratings, received status ratings, and speech behavior – I found evidence that these were

significantly influenced not only by the participant's current status level, but also by the status level they had previously experienced in their first group. Generally speaking, these results support the overarching hypothesis that status in one group can indeed "spill over" to other, distinct groups, namely by biasing the participant's perception of their own status, influencing speech behavior, and ultimately affecting the status judgments formed by team members.

### **General Discussion**

The purpose of this research was to explore the possibility of status spillover; in other words, to understand whether and how the status we hold across different contexts and groups influence one another. I approached this goal by testing how moving between groups where individuals hold different status levels influences their subjective interpretation of their current status, individual performance, speech behavior, and the status judgments formed by team members. In Study 1 I found evidence that individuals who are currently objectively at the same status level experience their status differently depending on how they were positioned in the preceding group. Individuals who suffered a loss in status (i.e., were previously at a higher status level) experience their current standing as being higher than what they would otherwise experience it to be if there was no spillover effect from their previous status level. As for individuals who enjoy a gain in status (i.e., were previously at a lower status level), they experience their current standing as being even higher than both what they would otherwise experience it to be if there was no spillover effect, and also what the status losers experience it to be, despite them all being objectively at the same final status level. This evidence thus suggests that, when individuals suffer a loss in relative status between groups, their self-perception of their final status level is anchored on their previous higher standing, which keeps them from

adjusting their perception sufficiently to their new status and thus overestimating how much status they actually presently have. Conversely, when individuals experience a gain in relative status between groups, they overshoot their subjective interpretation of how much status they gained, which leads them to also overestimate how much status they presently hold.

Having established the main effects, in Study 2 I sought to understand what might be potential mechanisms behind the anchoring and overshooting patterns observed. I predicted that status gainers' overestimation of their status level was partly due to optimism, but I failed to find supporting evidence. In the case of status losers' overestimation of their status level, I hypothesized that self-esteem played a role such that the fundamental motivation to maintain their self-esteem kept these participants' self-esteem elevated beyond the period in which it was attached to their actual higher status. This time I did find evidence for mediation, such that the significant difference in self-perceived status between participants who went from high to average status and those who remained at the average status level throughout was due to their differences in self-esteem.

The dependent variable I had been using thus far was based on participants' perception and interpretation of the status afforded to them by others. In Study 3 I wanted to test if these perceptions actually influenced performance. My hypotheses, based on previous research, were that losing status would harm performance, while gaining status would enhance performance relative to someone who remained constant at the final status level throughout. I failed to find support for either of these hypotheses, though I did find a significant difference in performance between those who lost and those who gained status. More specifically, gaining status seems to have actually led to worse performance than losing status. One possible explanation, which remains to be tested in future research, is that gaining status leads to overconfidence about one's

own abilities, leading them to jump to unjustified conclusions, while losing status makes individuals more cautious and guarded, and thus more likely to adopt defensive behaviors such as double-checking their work to avoid any risk of further status decreases.

Lastly, in Study 4 participants were brought into the lab to form in-person groups, within which they could actually experience the manipulated status levels as opposed to merely imagining it as a scenario. This paradigm allowed for capturing not only self-perceptions of status but also team-member status evaluations, and also for measuring actual speech behavior during the team activity through the use of Sociometric badges. This study provided further evidence that indeed status can “spill over” from one group to another, distinct group. In fact, participant’s previous status level in a different group affected not only their perceptions of their current amount of status, but also the amount of time and how loudly they spoke. Ultimately, the participant’s previous status level affected their behavior or contribution to the group enough for it to significantly affect the status judgments formed by team members who were unaware of the participant’s previous status level. Interestingly, while self-perceived status ratings tended to be lower among participants who lost status than those who gained, team members afforded in general higher status to those who had lost status than those who gained. This apparent mismatch between status self-perceptions and status judgments from others is an intriguing puzzle worth disentangling in future research. My hypothesis is that the experience of status loss humbles participants and increases their awareness of others’ perspectives and needs, and in turn this more pro-social or communal behavior is positively rewarded by others; with the opposite prediction for those who gain status.

## **Theoretical and Practical Implications**

Together, these findings contribute to our understanding of the dynamic nature of status in several ways. Although a few recent studies have begun to explore the implications of status losses and gains (Bendersky & Shah, 2012; Marr & Thau, 2014; Pettit et al., 2010) this is, to my knowledge, the first study that looks at the consequences of moving between groups where individuals enjoy different levels of status. This perspective is particularly important considering the numerous group contexts individuals routinely inhabit during the course of organizational life.

Overall, the results suggest that, as individuals experience a change in status between groups, they may not perceive their status accurately nor behave in accordance with the status level afforded to them by their peers. This points to a potential boundary condition to the prevailing wisdom that individuals' perceptions of their own status levels are usually highly accurate (Anderson, Ames, et al., 2008; Anderson et al., 2006), suggesting that there may be conditions under which status spillovers lead individuals to misinterpret their current status. The resulting misalignment between an individual's status self-perception and the status that he/she actually holds can destabilize the social order, coordination and predictability that a social hierarchy usually provides, with critical consequences for group dynamics. The fact that the results in three of the studies suggested that both those who lost and those who gained status ultimately overestimated their own status is particularly problematic, as this form of misalignment is that which most affects group functioning, with individuals failing to defer to those who actually have higher status, and trying to speak more frequently and behave more assertively than the group expects them to (Anderson et al., 2006).

Furthermore, the results run counter to existing evidence that status loss is expected to be more harmful than the benefit from an equivalent status gain (Pettit et al., 2010). These results suggest, for example, that individuals might misperceive how much the subjective experience of their status will change, or that their motivation to self-enhance and protect their self-esteem leads them to focus on whatever aspect is more favorable to the interpretation of higher status – keeping their previous status level salient, or emphasizing the rewarding experience of improving their relative standing.

Finally, most of the existing research on status has relied on self-reports of behaviors or intentions, and occasionally assessments by peer group members or external observers, which are inherently subjective and prone to biases. The introduction of Sociometric badges as a tool for capturing much more objective and granular measures of status-related behaviors than those usually employed is thus a promising contribution to the field, and it may allow for more reliable and concrete comparisons across conditions, and for capturing more nuanced differences in behavior.

### **Limitations and Directions for Future Work**

While all four studies consistently provide evidence that status can indeed “spill over” from one group to another – affecting individual’s self-perceptions of status, behavior, and ultimately the status judgments formed by their team-members – the direction of the bias from gaining or losing status specifically is less clearly resolved. The evidence from Studies 1-3 suggest that losing status results in anchoring (over-estimating how much status one actually has in the present moment), while gaining status results in overshooting (also over-estimating how much status one actually has in the present moment). Study 4 provides less clear evidence, and that may be due to several reasons. One is simply the fact that, while Studies 1-3 compared only

the three conditions in which participants experience the middle level of status in the second group, Study 4 extends to all nine combinations of three status levels across two groups. In an attempt to look for generalizable findings that are not specific to a particular level of status, the analyses were conducted on the full set of conditions, making it less likely to pick up on effects that may vary depending on the current level of status. Second, there is a potentially relevant difference that comes from the fact that Studies 1-3 relied on scenarios while Study 4 involved in-person groups. Unlike Study 4 in which the participants were forced to spend the specified amount of time with each group, the scenarios in Studies 1-3 essentially give participants some degree of freedom in deciding how much time and effort they spend considering each scenario. To the extent that participants may have been inclined to spend more time contemplating the higher status scenario, this manipulation may have acted as a stronger prime and, as a result, have weighed more heavily in participant's subsequent status self-perception ratings. This doesn't invalidate the results – it merely points to a potentially important moderator of the effect, and one that could potentially be used strategically in every-day life.

Similarly, in the beginning of this paper I pointed to a few potential anchoring and overshooting mechanisms through which the experience of losing and gaining status might influence individuals' subjective interpretation of their present status. Another important direction for future research is to uncover other psychological mechanisms that may be behind these two effects, as well as contextual and individual moderators that may strengthen or weaken their affect.

As mentioned above, the present findings point to a potential boundary condition to the understanding that individuals' perceptions of their own status levels are usually highly accurate, suggesting that there might be conditions under which status spillovers lead individuals to

misinterpret their current status. A particularly ripe area for future research and theoretical development is thus to explore what conditions might increase the likelihood of these status spillovers, namely when one's status in other groups is made salient by features of the group and context such as a similar tasks, shared group members, temporal proximity, or same physical space or organizational context.

## **Conclusion**

In sum, this research begins to explore the possibility of status spillover between groups. The results counter the prevailing wisdom that individuals are highly accurate in assessing their status, suggesting that, at least under some conditions, self-perceptions of their current status may be influenced by their status in other groups. More specifically, I found that individuals who are currently objectively at the same status level experience their status differently depending on how they were positioned in a preceding group. These findings contribute to our understanding of the psychological influence of status changes as individuals rotate between different groups.

CHAPTER 2.  
STATUS VARIANCE:  
VARIANCE IN ONE'S STATUS ACROSS GROUPS HARMS WELL-BEING  
BUT IMPROVES PERSPECTIVE-TAKING

Catarina R. Fernandes

*Harvard Business School*

Alison Wood Brooks

*Harvard Business School*

## Abstract

Most people belong to many different groups. While some people experience consistently high or low status across all of their groups, others experience wildly different levels of status in each group. In this research, we examine how status variance – the degree to which one’s status varies across groups – impacts well-being and perspective-taking. Across five studies, we find robust evidence that status variance (controlling for average status) has negative intrapersonal, but positive interpersonal, consequences. Study 1A shows that higher status variance across many groups is related to lower levels of life satisfaction, self-esteem, and subjective social status. Study 1B tests the causal relationship between status variance and well-being, demonstrating that even thinking about one’s status variance can lead to lower feelings of happiness. Study 2 focuses on attitudes towards the most status-inconsistent groups and shows that individuals are most likely to leave the groups in which their status is furthest away from their mean personal status across groups, irrespective of whether the deviance is positive (much higher status than average) or negative (much lower status than average). Studies 3A and 3B shift to investigate the interpersonal effects of status variance on perspective-taking. Study 3A shows that status variance is related to higher levels of trait perspective-taking and empathetic concern, and Study 3B that thinking about one’s status variance increases perspective-taking on a task. Taken together, the results indicate that those whose status is inconsistent across groups experience lower levels of well-being, but are better at understanding others’ points of view.

## **Status Variance:**

### **Variance In One's Status Across Groups Harms Well-Being**

#### **But Improves Perspective-Taking**

Imagine a 30-year-old software engineer with two young children. Across the various domains in her life, she may simultaneously belong to many groups, including a nuclear family, an extended family, a large software company, a smaller engineering department within the software company, a women-in-tech group, an adult basketball team, a book club, a breastfeeding support group, and a group of college friends that meets for cocktails once a month. Many aspects of these groups are likely to vary dramatically, including the other members of the group (to whom she is compared) as well as the characteristics and skills that are valued in each context. As a result, her position in the status hierarchy of each group is potentially distinct. For example, she may enjoy high status in her engineering department, where her strong mathematical background is highly valued, but low status in her book club, where the other book club members care less about her math ability.

Though research on status tells us much about the antecedents and consequences of experiencing status in one group (e.g.: Anderson et al., 2001; Anderson & Kilduff, 2009b; Belliveau et al., 1996; Berger et al., 1998; Blader & Chen, 2012; Lount & Pettit, 2012; Pettit & Sivanathan, 2012), little is known about how the aggregated experience of one's status across the multiple groups to which one belongs might influence intrapersonal and interpersonal outcomes.

In the current work, we explore the consequences of status variance (i.e., higher variance in one's status level across the various groups one belongs to) versus status consistency across

multiple groups. We explore its intrapersonal and interpersonal consequences, at both trait and state levels.

### **Status In One Group**

Status is the relative level of respect, prominence, and esteem that an individual possesses in the eyes of others (Anderson et al., 2001). It is a defining characteristic of human interaction that emerges and persists in almost every form of social group (Anderson, Hildreth, & Howland, 2015; Berger et al., 1972; Magee & Galinsky, 2008; C. L. Ridgeway, 1987; Sidanius & Pratto, 1999). In addition to being ubiquitous, status is consequential. Compared to low-status individuals, high-status individuals have greater access to resources (e.g., money, social support), and enjoy greater physical and psychological well-being (Adler, Epel, Castellazzo, & Ickovics, 2000; Anderson et al., 2015; Anderson, Kraus, Galinsky, & Keltner, 2012; Belliveau et al., 1996).

One of the most important functions of status hierarchies is that they facilitate communication and deference patterns – the status hierarchy clarifies who should be given more airtime and who should enjoy greater participation in the decision-making process (Anicich, Swaab, & Galinsky, 2015; Halevy, Chou, Galinsky, & Murnighan, 2012; Magee & Galinsky, 2008). Group members infer each member's skills and potential contributions towards the group's goals, and afford relative status accordingly, with the intention of placing more responsibility and influence opportunities in the hands of those who seem to hold the greatest potential and willingness to help the group advance toward its goals (Anderson et al., 2015; Anderson & Kilduff, 2009a, 2009b; Hogg, 2001).

Status research has traditionally focused on understanding both the antecedents of status, such as personal characteristics and interpersonal interactions that tend to result in high or low

status attributions (Anderson et al., 2001; Anderson & Kilduff, 2009a, 2009b; Berger et al., 1972), as well as the consequences of status, including behavioral differences and benefits from attaining high or low status (Adler et al., 2000; Anderson et al., 2015; Belliveau et al., 1996; Berger et al., 1998; Blader & Chen, 2012). For example, individuals high in trait dominance, who typically behave in assertive, forceful, and self-assured ways, tend to gain higher status because those behaviors are interpreted by team members as signals of competence (Anderson & Kilduff, 2009b). Research on the consequences of status has found that high-status individuals tend to perceive others' intentions as more positive and, consequently, tend to trust others more (Lount & Pettit, 2012), to approach subordinates at interpersonal distances that indicate intimacy (Dean et al., 1975), and to tease more frequently, sometimes in hostile ways (Keltner et al., 2001). Compared to low-status individuals, high-status individuals report hearing louder applause and seeing more favorable facial expressions in response to their own performance (Pettit & Sivanathan, 2012) and in general expect to accrue more rewards than those occupying lower-status positions (Berger et al., 1998).

Importantly, most of this previous work has examined status in one group at one point in time. This approach has allowed scholars to identify the factors that lead to stable levels of high or low status, and to compare how the behavior of individuals with high and low status differs. This approach is a logical and important starting place for scientific inquiry. However, there are some important limitations. First, most of this work traditionally assumed that one's status in a group is stable over time. Recent calls to explore the dynamic side of social hierarchies (Bendersky & Pai, 2018; L. Greer & Bendersky, 2013; Magee & Galinsky, 2008) have led some to relax this temporal assumption, and the field has begun to uncover several processes that can lead to status change, as well as some of its consequences (e.g.: Bendersky & Pai, 2018;

Bendersky & Shah, 2012; Marr & Thau, 2014; Pettit et al., 2013; Pettit et al., 2010). The second limitation, that still persists in most recent research however, is that it has neglected to consider how status might vary across the different groups to which every particular individual belongs.

In life, the experience of status is more rich, complex, and dynamic than the extant literature would lead us to believe. Most individuals belong to many different groups, across both professional and personal domains, in which they may have potentially different and contrasting status levels. It is important to understand whether and how the experience of status variance may influence individuals beyond what their particular status in a group would predict.

### **Status Across Multiple Groups**

An individual's status in a group depends on relative rank. Who else belongs to the group and how does the focal individual compare to them? The antecedents of status include trait-level variables (e.g., gender, age, assertiveness, math skills), along with the congruence of one's traits with the traits considered valuable by a particular group in a particular context (e.g.: Anderson et al., 2001; Anderson & Kilduff, 2009b; Berger et al., 1972; Magee & Galinsky, 2008; C. L. Ridgeway, 1987). More simply, status is context-dependent and, as such, one's skills and characteristics are likely to be valued differently across different groups and contexts, depending on the type of tasks and activities required, the range of experiences and characteristics of the group members, the frequency with which the group interacts, and a multitude of other situation-specific variables (Magee & Galinsky, 2008).

Prior research demonstrates that individuals behave differently when they are afforded high versus low status in a particular group, but we know very little about how individuals experience the aggregate collection of different status levels – how they think about and experience the contrast between their status levels across multiple groups. An individual may be

valued differently (or similarly) across the groups to which she belongs, and consequently afforded more status in some groups and less in others (or consistently high or low status across all groups). For example, while a particular individual's dark sense of humor may be greatly appreciated in a group of friends and garner high status in that group, the same dark sense of humor may be viewed as inappropriate and incompetent in a professional work context and lead to lower status among colleagues (Bitterly, Brooks, & Schweitzer, 2017).

To illustrate this idea, let's return to our software-engineer-mom-in-a-book-club example. Let's imagine she has a strong mathematical background and is more comfortable handling numbers than letters. Her quantitative training, experience, and intuition are likely to be both evident and highly valued by her colleagues in her engineering department, garnering her high status in her work group. However, in the book club she recently joined, her quantitative abilities are less observable, less relevant, and less valued by the other members of the group, so she is less likely to have high status, especially compared to the more seasoned members of the book club or those who exhibit more of the traits that are valued in this context. With this work, we aim to investigate: 1) does the status variance she experiences across her groups, including her engineering department and book club, influence her psychological well-being?; 2) does it influence her ability to understand others' perspectives?

To begin to understand the number and diversity of groups to which individuals belong in their lives – and the potential status variance people experience – we conducted a pilot study on Amazon's Mechanical Turk, in which we asked 200 participants to list up to ten groups to which they currently belong. There were no incentives tied to the number of groups they listed. Still, people listed 7.8 groups on average. These included a wide array of group types, including nuclear families, college friends, sports teams, church groups, community and volunteer groups,

executive boards, work teams, organizations, professional committees, and many others. We also asked participants to indicate, for each group, how much respect, influence, prestige, admiration, and status they felt they had relative to the other group members on a 7-point scale (Anderson et al. 2001), and subsequently aggregated these items to compute a measure of perceived status in each group (average  $\alpha = 0.93$ ). Taking each participant's perceived status scores across all of his/her groups, we calculated its variance, as a measure of the participant's status variance. The average level of status variance was 1.29, and its standard deviation was 1.28, reflecting a broad range of experiences of status variance among the participants.

Considering the preliminary results from this pilot data, if we conservatively estimate that people belong to seven groups on average, and each group can differ in important and multitudinous ways, this would suggest that there may indeed be much variance in terms of how much status each individual is afforded by his/her peers across all of those different groups. Given that being in a high vs. low status position requires such distinct patterns of behavior and social interaction, and its consequences are so starkly different, we expect that having to navigate between groups where one occupies a wide range of status levels can have profound intrapersonal and interpersonal consequences.

### **Status Variance: Intrapersonal Consequences**

We predict that status variance will have important intrapersonal consequences. In any group, people are motivated to assess and interpret their position in the status hierarchy (Anderson et al., 2001). They sort themselves and the other group members into a hierarchy by observing cues like airtime and deferential behavior, and after they intuit their position in the hierarchy, they try to behave accordingly, in a cycle of behavior and observation (Anderson et al., 2006). In the current research, we expect that assessing and interpreting one's own position

in the status hierarchy of a group, and adjusting behavior accordingly, has intrapersonal costs that will be especially high if individuals must observe and revise their status and behavior frequently as they change from interacting with one group to another. We suspect there are psychological transition and switching costs associated with shifting from high to low status (or vice versa) as people move from one group context to another.

First, consider someone whose status varies little across groups. She can maintain the same expectations and behave in a similar way as she moves from interactions with one group to another, as it requires little or no interpretive processing, and lower needs to monitor, control, and adjust her behavior compared to how she behaved in the previous group. In contrast, consider someone whose status varies significantly across her groups. She knows she ought to behave differently in different contexts and so, as she moves from one group to another, she needs to constantly re-identify her status standing in each group and adjust her behavior accordingly. An individual who goes from a meeting where she enjoys high status to one where she has much lower status, for example, will need to realize the change in her expected role and may have to control the impulse to speak more than is warranted (Fernandes, working).

We draw on several existing theoretical models to inform our hypotheses linking status variance and intrapersonal consequences, such as life satisfaction and self-esteem. First, self-discrepancy theory (Higgins, 1987, 1989) suggests that individuals seek psychological consistency, and internal disagreement can have negative emotional and psychological consequences (Higgins, Klein, & Strauman, 1985). An individual's experience of status is likely to be an important component of her self-view, and the more frequent, habitualized, and internalized a particular status level is, the more we would expect it to inform the individual's understanding of the role they see themselves playing broadly in society – and the role they

idealize and expect of themselves. For individuals whose status level is highly consistent across groups, that consistent status level should be easily integrated into the sense of self – since she usually has the same level of status across most situations, there is little doubt about who she is and what role she is expected to play. As a result, in the vast majority of situations, a highly status-consistent individual will experience congruence between her actual self and her ideal self.

On the other hand, a highly status-inconsistent individual will have a more complex relationship between her actual and ideal self. Her variance in status experiences will make it difficult for her to settle on a clear sense of self. Additionally, whatever the status level she may eventually settle on associating with her ideal self, she will experience discrepancy relative to her actual self every time she interacts with groups in which her temporary status level is deviant from her ideal self. Discrepancy between actual and ideal self has been associated with sadness and lower levels of self-esteem, life satisfaction, and general well-being (Gallagher, 2017; Higgins et al., 1985; Marcussen, 2006). We expect status variance to have similar negative outcomes.

Second, while self-discrepancy theory focuses on the contrast between the individual's ideal and actual selves, self-verification theory (Swann Jr, 2011) compares the individual's self-view with how others seem to view her. Since status is a social conferral process (Anderson & Kilduff, 2009a), an individual's interpretation of her own status in a group is ultimately her understanding of how the other group members view her. As a highly status-consistent individual moves between groups, she will continually see her self-view verified by others, while a highly status-inconsistent individual will experience variance in the degree to which the status she is afforded by others matches her general perception of herself.

Third, the experience of status across different groups is, in many ways, similar to the experience of multiple identities (Stryker, 1980). As such, when the expectations of others are congruent and consistent with the individual's self-view, they support and reinforce the identity verification process, building and maintaining self-esteem (Cast & Burke, 2002). Similarly, multiple identities have been associated with higher levels of well-being if they require similar behaviors, but lead to lower well-being if the identities conflict with each other and require different behaviors – as would be the case across status-inconsistent groups (Brook, Garcia, & Fleming, 2008; Simon, 1995).

Finally, research on habit theory suggests that, as individuals engage in the same or similar cognitive or motor tasks over time, their neural networks are exercised and ingrained, increasing the efficiency with which the brain can respond in similar situations in the future (Clark, Sanders, Carlson, Blanche, & Jackson, 2016). As an individual repeatedly faces the same behavioral choice in the same situation, and thus repeats her previous response, associations build up between the cues that define the context and her response (Verplanken, 2006). For someone with a high level of status consistency, her dispositions and tendencies to behave, act, think, or feel in a particular way become automatized and natural. Ultimately, this predictability and fluency across contexts allows status-consistent individuals to instantaneously and effortlessly behave in accordance with their status level – confident in their habitualized routine and sequence of behavioral and social patterns, and with low cognitive costs from switching between groups.

Taking these predictions together, we expect that people who experience greater variance in their status across groups must expend more effort in assessing, interpreting, and adjusting their behavior as they move between groups. The switching costs on cognitive processing,

understanding of self-concept, and enjoyment of the status-deviant groups are likely to be high. As a result, greater variance in one's own status position and pattern of expected behaviors is likely to generate a weaker sense of a coherent self and one's role, which we expect to be reflected in lower reported levels of well-being.

Accordingly, we predict:

*Hypothesis 1A: Greater status variance will be associated with lower well-being (correlational).*

*Hypothesis 1B: Those who recall status-inconsistent experiences, compared to those who recall status-consistent experiences, will experience lower state happiness (causal).*

If status variance is negatively associated with well-being, how do individuals experience the groups in which their status level is furthest away (i.e., most deviant) from their average status level? Highly status-deviant groups are likely to require the greatest adjustment in the individual's expectations and behavior, and therefore may be the most taxing in terms of switching costs. Furthermore, individuals are motivated to avoid both discrepancy between their actual and ideal selves (Higgins, 1987, 1989), and between their self-view and how others view them (Burke, 1991). When faced with such contrasts, both self-discrepancy theory and self-verification theory predict that there will be a desire to resolve the perceived discrepancy (Burke, 1996; Higgins et al., 1985). One way to do so is by exiting the group, if at all possible. We thus expect that one's intentions to exit a group will be strongest in groups that deviate most dramatically from one's average status. The absolute difference between an individual's status level in a particular group relative to the overall average she experiences across all groups should drive this behavior, regardless of whether it is a group where the individual has particularly high or low status. Following these considerations, we predict that:

*Hypothesis 2: Individuals will express greater intentions to exit groups in which their status level is furthest away from their mean status across all groups.*

### **Status Variance: Interpersonal Consequences**

While we predict that status variance harms intrapersonal outcomes, we expect that its interpersonal consequences may be more positive. Specifically, we expect that knowing what it feels like to have low status in some contexts and high status in others will make people better at understanding the perspectives of others.

Perspective-taking, the capacity to imagine the world from the vantage point of another person, plays a fundamental role for social coordination and functioning (Davis, 1983). By increasing consideration for others' perspectives and needs, perspective-taking facilitates coordination and helps individuals navigate their social worlds effectively (Galinsky, Ku, & Wang, 2005; Galinsky, Wang, & Ku, 2008). It also helps reduce stereotyping and derogation (Batson, 1997; Galinsky & Moskowitz, 2000). Greater perspective-taking leaves interaction partners more satisfied (Galinsky, Maddux, Gilin, & White, 2008; Galinsky, Magee, Rus, Rothman, & Todd, 2014), and can help stigmatized minorities feel more at ease with majority group members (Todd, Bodenhausen, Richeson, & Galinsky, 2011).

Engaging in perspective-taking, however, is not necessarily an easy task. Individuals tend to overestimate how accurately they can perceive another person's feelings and mental states by merely watching their body language, facial expressions, and other behavioral cues (Eyal, Steffel, & Epley, 2018). Instead, actually putting oneself in the other person's situation and using one's own experience to simulate the other person's experience is a much more effective course of action, allowing individuals to make more accurate predictions about others' true feelings and emotional experiences (Zhou, Majka, & Epley, 2017). This would suggest that having personal

experience with the status of one's interaction partners may prove to be an important factor for perspective-taking.

Some prior work has linked status and perspective-taking. For example, given that status evaluations are conferred by other people (Blader & Chen, 2012; Emerson, 1962), status-maintenance concerns lead individuals to increase their attention towards others (Flynn, Reagans, Amanatullah, & Ames, 2006). Given that high-status individuals' standing is dependent on the impressions others have of them, there is evidence that they tend to act in ways that may be regarded as respectable and commendable (Blader & Chen, 2012). Recent work on the effects of status changes as a result of a language policy change (Neeley & Dumas, 2016) found that individuals who experienced an unearned status gain, which they attributed to chance, expressed high levels of perspective-taking and empathy concerns for those who hadn't reaped such benefits. This provides some initial evidence to the idea that changes in status may result in positive interpersonal outcomes.

Emerging work on the consequences of shifting expertise also offers evidence that status variance might improve perspective-taking (Zhang, working). This work finds that experts often forget what it is like to be a novice and so, when they give advice, they tend to use more abstract concepts that are not actionable or helpful for novices. By reminding experts what it feels like to be a novice again (e.g., by forcing expert guitar players to play with their non-dominant hand), they remember how difficult the task once was for them, and subsequently give more concrete advice that is considered much more actionable by novices.

Going back to our software engineer example and applying these mechanisms, we expect her to be better able to put herself in the shoes of the lower-status engineers in her firm because she knows firsthand what it means to experience low status (from her own experience in her

book club). Individuals who experience higher status variance will be more sensitive to how their words and behavior are interpreted by lower and higher status group members, and they may more carefully regulate their thoughts, words, and behaviors to be more considerate of differing perspectives. Even prompting people to momentarily consider the contrast between enjoying high status in one context and low status in another may, at least in the short term, improve perspective-taking.

In sum, we predict that:

*Hypothesis 3A: Greater status variance will be associated with greater trait-level perspective-taking (correlational).*

*Hypothesis 3B: Those who recall status-inconsistent experiences, compared to those who recall status-consistent experiences, will show improved perspective-taking (causal).*

### **Overview Of Current Research**

We test our hypotheses across five studies using survey and experimental methods to assess the impact of status variance on intrapersonal and interpersonal outcomes. Studies 1A-B explore how status variance relates to *intrapersonal* outcomes. In Study 1A, we test Hypothesis 1A by surveying adults to examine how status variance across the groups they belong to relates to their life satisfaction, self-esteem, and subjective social status. In Study 1B, we test Hypothesis 1B by using a recall exercise to experimentally manipulate status variance and assess its impact on state happiness. In Study 2, we test Hypothesis 2 by evaluating whether participants express greater intentions to exit status-deviant groups (groups in which their status is furthest away from the average status they are used to experiencing). Finally, in Studies 3A-B, we investigate how status variance relates to *interpersonal* outcomes. In Study 3A, we test

Hypothesis 3A by surveying adults online to examine how status variance across the groups they belong to relates to trait-level perspective-taking and empathetic concern. Finally, in Study 3B, we test Hypothesis 3B in the lab by using a recall exercise to experimentally manipulate status variance and assess its impact on a perspective-taking task.

### **Study 1a: Status Variance And Trait-Level Well-Being**

In Studies 1A-B, we explore the intrapersonal consequences of status variance. In Study 1A, we do so correlationally, measuring participants' status variance based on their own perceptions of their relative status levels across the different groups they belong to in their real lives, and their self-reported scores on a set of well-being measures. In this study, we aimed to test Hypothesis 1A, that greater status variance would be correlated with lower well-being.

#### **Method**

##### *Participants*

We recruited 111 participants through Amazon's Mechanical Turk to complete our 20-minute survey in exchange for \$2.00. Sample size and exclusion criteria were determined a priori to ensure that participants spent a reasonable amount of time thinking about groups they belong to (we excluded participants who spent less than 60 seconds listing and describing the groups they belong to – and subsequently confirmed that these were indeed invalid responses that didn't address the instructions and questions asked). This exclusion left a final sample of 100 participants, 39% of whom were female, and who had on average completed college as the highest level of education. Also, 80% of the participants were over 25 years old, with an average age of 33.3 years.

### *Design and Procedure*

First, we provided participants with a definition of what qualifies as a group (“by ‘group’ we mean a collection of three or more people who meet on a somewhat regular basis to perform some joint activity or work towards a common goal”) as well as a list of diverse examples from other participants in our pilot study (e.g., “my group of marketing managers includes my boss, the other three marketing managers in my unit, and myself”; “my church volunteer committee is a group of five people who manage the volunteer opportunities for members at our church”). We then asked participants to list and briefly describe at least three, and up to ten, professional and personal groups to which they currently belonged. Participants provided a short name to identify each group, and we subsequently piped the group names into a series of questions about the groups in the remainder of the survey.

Next, for each group they had identified, we asked participants to report their perceived status by indicating, on a 7-point scale ranging from 1 “None or very little” to 7 “A lot”, how much respect, influence, prestige, admiration, and status they felt they had relative to the other members in each group (Anderson et al. 2001). Next, they completed our outcome measures, presented in randomized order: the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), a shortened version of the Rosenberg Self-Esteem Scale (Rosenberg, 1989; Tambs & Røysamb, 2014), and an adapted version of the MacArthur 10-rung subjective social status ladder asking participants to indicate the rung on which they see themselves, considering their status across the various groups to which they belong (Cantril, 1965; Singh-Manoux, Adler, & Marmot, 2003). We include the three measures in Appendixes D-F.

Finally, we collected a set of demographic variables, including participants’ gender, age, and income. We also asked participants to provide information about each of their groups: the

number of group members, gender composition, frequency of interaction, personal tenure in the group, whether the groups were professional or personal, and whether their membership was mandatory or optional.

## Results

### *Descriptive Statistics*

Table 1 provides the means, standard deviations, and correlations among all variables. Given that both income and gender correlated significantly with omnibus status, we included these two variables as controls in the subsequent hypothesis-testing models. On average, participants listed 6.06 groups, with 4.9 members, 50% female representation, with whom they met on a weekly basis, and to which they had belonged for 2-5 years. Additionally, 30% of the groups listed were professional in nature, and participants indicated that their participation in the group was optional in 71% of the cases.

Table 1: Means, standard deviations, and correlations among variables in Study 1A.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Overall Status Variance	1.41	1.78								
2. Omnibus Status	4.67	1.04	-0.19							
3. Satisfaction with Life	4.06	1.75	-.27**	.45**						
4. Self-Esteem	4.99	1.69	-.27**	.35**	.70**					
5. Subjective Social Status	5.16	1.72	-.31**	.46**	.48**	.28**				
6. Number of Groups	6.06	2.76	0.18	-0.01	0.02	-0.05	0.06			
7. Age	33.29	9.42	0.00	-0.07	-0.08	0.04	-0.02	-0.11		
8. Income	5.41	1.47	-0.06	.25*	0.17	0.15	0.17	-0.04	-0.08	
9. Gender (1=Female)	0.39	0.49	0.06	.21*	0.04	0.00	-0.09	-0.07	.23*	0.01

Note. N = 100

† p < 0.1; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001

### *Status*

We averaged the respect, influence, prestige, admiration, and status items to compute a measure of each participant's status in each group s/he listed (average  $\alpha = 0.96$ ). We then took the average of each participant's status scores across all his/her groups, which we call "omnibus status" ( $M = 4.67$ ,  $SD = 1.04$ ). We also calculated the variance of each participant's status scores across all his/her groups to compute a measure of each participant's status variance ( $M = 1.41$ ,  $SD = 1.78$ ).

### *Well-being*

We conducted ordinary least squares regressions to test the effect of status variance on each of our well-being measures: satisfaction with life ( $\alpha = 0.95$ ), self-esteem ( $\alpha = 0.94$ ), and subjective social status.

The results of the regressions appear in Table 2, where models 1a, 2a and 3a show the relationship between status variance and satisfaction with life, self-esteem, and subjective social status, respectively, controlling for omnibus status, number of groups, income, and gender. As predicted in Hypothesis 1A, we find that participants with greater status variance across his/her groups reported significantly lower satisfaction with life ( $b = -0.20$ ,  $t(92) = -2.15$ ,  $p = 0.034$ ), lower self-esteem ( $b = -0.19$ ,  $t(92) = -2.00$ ,  $p = 0.048$ ), and positioned themselves significantly lower on the subjective social status ladder ( $b = -0.22$ ,  $t(92) = -2.58$ ,  $p = 0.011$ ). Models 1b, 2b, and 3b show that all effects remain significant when number of groups and participants' income and gender are removed from the regressions. We don't test the model excluding omnibus status since testing the effect of the variance-based measure of status variance without controlling for its average would have little interpretative meaning in this context.

Table 2: OLS models predicting well-being measures in Study 1A and perspective-taking measures in Study 3A.

Variable	Well-being measures (Study 1A)						Perspective-taking measures (Study 3A)					
	DV: Satisfaction with Life		DV: Self-Esteem		DV: Subjective Social Status		DV: Perspective-Taking & Empathetic Concern (full scale)		DV: Perspective-Taking (sub-scale)		DV: Empathetic Concern (sub-scale)	
	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 6a	Model 6b
Overall Status Variance	-0.20*	-0.19*	-0.19*	-0.20*	-0.22*	-0.22*	0.13*	0.13*	0.12*	0.12†	0.15*	0.15†
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)
Omnibus Status	0.66**	0.67**	0.44*	0.44*	0.69**	0.65**	0.20**	0.22**	0.24**	0.26**	0.16†	0.19**
	(0.17)	(0.16)	(0.17)	(0.16)	(0.16)	(0.15)	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.09)
Number of Groups	0.05		-0.02		0.07		0.00		0.00		-0.01	
	(0.06)		(0.06)		(0.06)		(0.02)		(0.02)		(0.03)	
Income	0.08		0.07		0.08							
	(0.11)		(0.11)		(0.10)							
Gender (1=Female)	-0.14		-0.24		-0.61†		0.52**		0.38**		0.66**	
	(0.33)		(0.34)		(0.31)		(0.11)		(0.12)		(0.14)	
Intercept	0.57	1.20	3.07*	3.25*	1.67†	2.45*	3.22**	3.35**	2.98**	3.13**	3.46**	3.56**
	(0.99)	(0.80)	(0.99)	(0.80)	(0.93)	(0.77)	(0.41)	(0.39)	(0.43)	(0.40)	(0.51)	(0.49)

Note. N = 100 in Study 1A and N = 184 in Study 3A

† p < 0.1; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.00

## Discussion

In Study 1A we found that, consistent with Hypothesis 1A, individuals who experience greater variance in their status across their groups also report lower levels of well-being (across three different measures). Importantly, this negative relationship is observed over and above the effect of their overall average status level across all groups and the total number of groups listed

by each participant. Taken together, this evidence suggests that status variance is experienced negatively at the intrapersonal level.

### **Study 1b: Status Variance And State-Level Well-Being**

Study 1A examined the correlational relationship between status variance and well-being. In Study 1B, we use a recall paradigm to experimentally manipulate status consistency. We asked participants to focus on status-inconsistent or status-consistent groups in their lives to test whether simply thinking about one's experiences of status variance influences happiness – a very conservative experimental test of status variance on well-being. In doing so, we aimed to test Hypothesis 1B, that recalling experiences of status variance, compared to recalling experiences of status consistency, decreases state happiness.

#### **Method**

##### *Participants*

201 participants were recruited from Amazon's Mechanical Turk to complete our 10-minute survey in exchange for \$1.00. Sample size and exclusion criteria were determined a priori to ensure that participants actually wrote about two real groups (we excluded participants who wrote less than 10 words describing the two groups they belong to – and subsequently confirmed that these were indeed invalid responses that didn't address the instructions and questions asked). This left a final sample of 158 participants, 35% of whom were female, with an average age of 33.0 years.

##### *Design and Procedure*

As in Study 1A, we gave participants a definition of a group, a list of diverse examples of groups from our pilot study, and a brief explanation of what it means to have high and low status

in a group: “Importantly, people vary in the degree of respect, influence, prestige, admiration, and status they have in each group they belong to in their lives. In some groups, you might have high status compared to the others in the group - you may feel you are very admired, your opinion carries a lot of influence, others look up to you, and you generally feel you're in a position of prestige. In other groups, however, you might have low status compared to the others in the group - you may feel others have more influence than you, your opinion doesn't matter much, you don't feel other people admire or look up to you, and in general you feel most of the prestige is reserved for others.”

Next we presented our experimental manipulation: status variance versus status consistency. Those randomly assigned to the status-inconsistent condition were told to: “Please think about two groups you belong to where you have very different status levels. That is, one group where you feel that you have a great deal of influence and your opinion carries a lot of weight, and another group where you feel you have very little influence and your opinion doesn't matter much.” Those in the status consistent condition, in turn, read: “Please think about two groups you belong to where you feel you have more or less the same status level in both groups. These may be groups in which you have high status in both groups, low status in both groups, or average status in both groups. Any level of status is fine, as long as your status in both groups is similar across both groups.” All participants were asked to describe the two groups, their status level in them, and how belonging to those groups made them feel. They were also instructed to provide a short identifying name that we could subsequently pipe to the relevant questions in the remainder of the study.

Participants were then shown the names of their two groups and asked to indicate, as in Study 1A, how much respect, influence, prestige, admiration, and status they felt they had

relative to the other members in each group. Finally, they completed our main dependent measure: “How happy do you feel right now?” on a 7-point scale ranging from 1-Extremely unhappy to 7-Extremely happy.

## **Results**

### *Descriptive Statistics and Manipulation Check*

As in Study 1, we averaged each group’s respect, influence, prestige, admiration and status items ( $\alpha = 0.94$ ) to compute a measure of status in each group. We then took the mean of each participant’s two status scores to compute their measure of “average status,” as well as the absolute difference between each participant’s two status scores to compute their measure of “status variance.”

We conducted two ordinary least squares regressions with experimental condition as the independent variable and average status and status variance as the dependent variables. As expected, the average status of the participants in the status-inconsistent condition ( $M = 5.12$ ,  $SD = 1.63$ ) was not significantly different from the average status of the participants in the status-consistent condition ( $M = 5.03$ ,  $SD = 1.34$ ), ( $b = 0.09$ ,  $t(156) = 0.37$ ,  $p = 0.71$ ). Status variance, however, did differ significantly across conditions: as expected, status variance was significantly higher in the status-inconsistent condition ( $M = 2.27$ ,  $SD = 1.70$ ) than in the status-consistent condition ( $M = 0.81$ ,  $SD = 1.03$ ), ( $b = 1.47$ ,  $t(156) = 6.45$ ,  $p < 0.001$ ), confirming the effectiveness of our manipulation.

### *State Happiness*

We conducted an ordinary least squares regression to test the effect of status variance condition on happiness, controlling for the average of the participants’ status in the two groups. As predicted in Hypothesis 1B, we find that participants in the status-inconsistent condition

reported significantly lower levels of happiness ( $M = 5.33$ ,  $SD = 0.45$ ) than participants in the status consistency condition ( $M = 5.73$ ,  $SD = 0.37$ ), ( $b = -0.43$ ,  $t(155) = -2.81$ ,  $p = 0.006$ ). We depict these results in Figure 10.

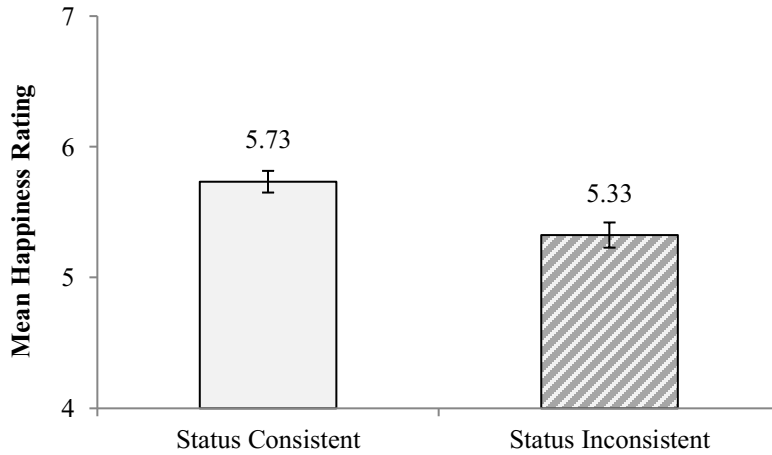


Figure 10: Mean state happiness across conditions in Study 1B. Error bars represent 95% CI for the group means.

## Discussion

Study 1B bolsters the findings from Study 1A by providing causal evidence that focusing on status-inconsistent groups leads to lower levels of state happiness than focusing on status-consistent groups. Importantly, this effect holds when controlling for the participants' average status across both groups. These results support Hypothesis 1B that status variance, compared with status consistency, decreases feelings of happiness. Taken together, Studies 1A-B demonstrate that experiencing status variance across the groups in one's life – shifting between different levels of status from group to group – decreases intrapersonal well-being.

## **Study 2: Intentions To Exit Status-Deviant Groups**

In Study 2, we zoom in on those specific groups that are most status-inconsistent and examine intentions to exit. We test Hypothesis 2, that exit intentions are stronger for more status-deviant groups. Importantly, we test if this effect holds irrespective of whether those groups are inconsistent due to very high or very low status compared to one's internal average status across groups. As in Study 1A, we tested this hypothesis correlationally, measuring participants' status variance based on their perceptions of their relative status levels across the different groups they belong to in their real lives, and their self-reported desire to leave (or stay) in each group.

### **Method**

#### *Participants*

We recruited 200 participants through Amazon's Mechanical Turk to complete our 15-minute survey in exchange for \$1.50. For this study, we included an attention check embedded in one of the survey's scales and excluded participants who failed to provide the correct response. This exclusion left a final sample of 191 participants, 69% of whom were female, with an average age of 34.2 years.

#### *Design and Procedure*

As in Studies 1A-B, participants were shown the definition of a group and a list of examples. We asked them to list and briefly describe three to ten professional and personal groups they currently belonged to, to provide an identifying name to be piped into subsequent questions, and to indicate on a 7-point scale how much respect, influence, prestige, admiration, and status they had in each of the groups relative to the other group members. We then asked participants to indicate, for each group, "the extent to which you would like to exit / leave each

group - assuming there were no limitations to doing so”, on a 7-point scale ranging from 1 = Definitely wouldn't exit to 7 = Definitely would exit.

Lastly, participants answered a set of demographic questions, including their age, gender and income, and provided the same basic information about each group as in Study 1A: the number of group members, gender composition, frequency of interaction, personal tenure in the group, whether the groups were professional or personal, and whether their membership was mandatory or optional.

## **Results**

### *Descriptive Statistics*

Participants listed an average of 5.99 groups, with approximately 5 members, 50% female composition, with whom they met on a weekly basis, and to which they had belonged for 2-5 years. Additionally, 36% of the groups listed were professional in nature, and participants indicated that their participation in the group was optional in 69% of the cases.

For each group, we calculated the average respect, influence, prestige, admiration and status items ( $\alpha = 0.93$ ) to compute a measure of the participant's status in each group. We then took the average of each participant's status scores across all groups to compute their omnibus status ( $M = 4.95$ ,  $SD = 1.01$ ).

### *Exit Intentions*

For every group listed, we calculated the absolute difference between the status score in that group and the participant's omnibus status to compute a “status deviance” score for each group. To account for the multi-level nature of the data, we ran linear mixed-effects models with fixed effects for participant. The results are shown in Table 3. Model 1 shows that, controlling for the participant's status in each group, we find that exit intentions are strongest among those

groups with greatest status deviance ( $b = 0.16$ ,  $t(1123) = 2.28$ ,  $p = 0.023$ ), in support of Hypothesis 2. Models 2 and 3 show that the effect is robust to controlling for participants' omnibus status, and also for demographic and group characteristics.

Table 3: Linear mixed effects models predicting group exit intentions in Study 2.

Variable	Model 1	Model 2	Model 3
Status Deviance	0.16* (0.07)	0.19** (0.07)	0.1736* (0.07)
Status	-0.42*** (0.03)	-0.49*** (0.04)	-0.36*** (0.04)
Omnibus Status		0.27*** (0.08)	0.13† (0.08)
Number of Groups			0.01 (0.02)
Age			-0.01* (0.01)
Income			0.07* (0.03)
Gender (1=Female)			-0.11 (0.14)
Number of Group Members			0.00 0.02
Professional (vs. Personal)			0.70*** (0.10)
Tenure			-0.10*** (0.03)
Interaction Frequency			-0.16*** (0.03)
Female representation			0.03 (0.03)
Mandatory (vs. Optional)			0.08 (0.10)
Intercept	4.08*** 0.19	3.06*** 0.34	2.85*** (0.48)
Fixed effects for participant	Yes	Yes	Yes

Note. N = 191

†  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

## **Discussion**

Given the negative intrapersonal outcomes associated with status variance identified in Studies 1A-B, in Study 2, we sought to test whether individuals try to correct for this source of discomfort by wanting to exit their most status-inconsistent groups. The results from Study 2 show that indeed individuals show a stronger desire to leave groups in which their status level is furthest away from the overall average status they are used to experiencing. Importantly, this is true irrespective of whether the status-deviance is due to particularly high or particularly low levels of status in those groups.

### **Study 3a: Status Variance And Trait-Level Perspective-Taking**

Studies 1A-B and 2 focused on the *intrapersonal* consequences of status variance. In Studies 3A-B we shift to focus on *interpersonal* consequences, namely perspective-taking and empathetic concern. In Study 3A, we explore this relationship in a correlational survey, measuring participants' status variance across the groups they belong to in their real lives, and their scores on trait-level perspective-taking and empathetic concern measures. With it we test Hypothesis 3A, that greater status variance is correlated with greater perspective-taking ability.

## **Method**

### *Participants*

We recruited 200 participants through Amazon's Mechanical Turk to complete our 15-minute survey for \$1.50. We used the same exclusion criteria we determined a priori in Study 1A to ensure that participants spent a reasonable amount of time thinking about groups they belong to, excluding participants who spent less than 60 seconds listing and describing the groups they belong to. Despite the explicit instructions to list at least three groups, eight participants failed to

meet this threshold, and so were also excluded from the analyses. These exclusions left a final sample of 184 participants, 55% of them female, with an average age of 37.1 years.

### *Design and Procedure*

We followed the same initial procedure as in Study 1A, showing participants a definition of what was to be considered a group for the purpose of the study, as well as a list of diverse examples of groups from our pilot study. They were asked to list and briefly describe at least three and up to ten professional and personal groups to which they currently belong, and provide a short identifying name which could be subsequently piped into the rest of the survey. Also as in Study 1A, participants indicated on a 7-point scale how much respect, influence, prestige, admiration, and status they had in each of the listed groups relative to the other group members.

Next, they completed the Perspective-Taking and Empathetic Concern Scale (Davis, 1983) in which they were asked to rate, on a 5-point scale, how well each statement describes who they are. The scale includes 14 items, including “I try to look at everybody's side of a disagreement before I make a decision” and “Sometimes I don't feel very sorry for other people when they are having problems” (reverse coded). See Appendix G for the scale items.

Finally, participants reported demographics including age, gender and income. They were also asked to provide the same details about each group as in Study 1A: number of members, gender composition, frequency of interaction, personal tenure in the group, whether the groups were professional or personal, and whether their membership was mandatory or optional.

## **Results**

### *Descriptive Statistics*

Table 4 provides the means, standard deviations, and correlations among all variables. Given that gender correlated significantly with the perspective-taking scales, we included this

variable as a control in the subsequent hypothesis-testing models. On average, participants listed 6.85 groups, with approximately 10 members, 50% female representation, with whom they met twice a month, and to which they had belonged for 2-5 years. Additionally, 36% of the groups listed were professional in nature, and participants indicated that their participation in the group was optional in 68% of the cases.

Following the same procedure as in Study 1A, for each group we averaged the respect, influence, prestige, admiration, and status items to compute their status measure in each group ( $\alpha = 0.93$ ). We then took the average of each participant's status across all his/her groups to compute their omnibus status ( $M = 5.13$ ,  $SD = 0.86$ ). We also calculated the variance of each participant's status scores across all his/her groups to compute the status variance measure ( $M = 1.05$ ,  $SD = 1.02$ ).

Table 4: Means, standard deviations, and correlations among variables in Study 3A.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Overall Status Variance	1.05	1.02								
2. Omnibus Status	5.13	0.86	-.31**							
3. Perspective-Taking & Empathetic Concern (full scale)	4.63	0.81	0.09	.19*						
4. Perspective-Taking (sub-scale)	4.57	0.84	0.06	.22**	.86**					
5. Empathetic Concern (sub-scale)	4.69	1.00	0.10	0.12	.90**	.56**				
6. Number of Groups	6.85	2.50	0.02	-0.03	-0.01	0.01	-0.03			
7. Age	37.11	11.34	-0.13	0.07	0.09	0.08	0.09	-0.07		
8. Income	6.10	1.76	-0.06	0.03	-0.05	-0.01	-0.08	0.10	0.12	
9. Gender (1=Female)	0.55	0.50	-0.03	0.09	.33**	.24**	.34**	0.02	0.07	-0.05

Note.  $N = 184$

†  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

### *Perspective-Taking and Empathetic Concern Scale*

We aggregated the items from the Perspective-Taking and Empathetic Concern Scale ( $\alpha = 0.90$ ). We also aggregated the sub-scale items for Perspective-Taking ( $\alpha = 0.84$ ) and Empathetic Concern ( $\alpha = 0.88$ ) separately.

We used ordinary least squares regressions to test the effect of status variance on our trait-level measures of perspective-taking. The results are shown in Table 2, alongside the results from Study 1A. Model 4a shows the relationship between status variance and the Perspective-Taking and Empathetic Concern full scale, controlling for omnibus status, number of groups and gender. Models 5a and 6a show the equivalent relationships for each of the sub-scales: Perspective-Taking and Empathetic Concern, respectively. As predicted in Hypothesis 3A, we find that participants with greater status variance across their groups scored significantly higher on the Perspective-Taking and Empathetic Concern measure ( $b = 0.13$ ,  $t(179) = 2.35$ ,  $p = 0.020$ ). We see the same pattern when looking at each of sub-scales separately, with a significant positive relationship between status variance and perspective-taking ( $b = 0.12$ ,  $t(179) = 1.98$ ,  $p = 0.049$ ), and between status variance and empathetic concern ( $b = 0.15$ ,  $t(179) = 2.09$ ,  $p = 0.038$ ). Models 4b, 5b, and 6b show that the effects remain significant (marginally significant in the case of the sub-scales, with  $p = 0.056$  for perspective-taking and  $p = 0.053$  for empathetic concern) when number of groups and participants' income and gender are not included as controls.

### **Discussion**

While experiencing status variance seems to be associated with lower well-being, Study 3A provides evidence that there may be interpersonal benefits from status variance. Specifically, experiencing variance in status across the various groups one belongs to is associated with

greater ability to see the world from others' points of view – both in terms of cognitive perspective-taking and empathic concern.

### **Study 3b: Status Variance And State-Level Perspective-Taking**

Replicating the pattern of studies conducted for the intrapersonal measures, we extend the correlational findings from Study 3A by experimentally manipulating status variance in Study 3B. We designed this study to test Hypothesis 3B, that recalling experiences of status variance, compared to recalling experiences of status consistency, increases one's perspective-taking.

#### **Method**

##### *Participants*

We recruited 102 participants to participate in a “Study about groups” in a behavioral lab, for which they received \$15.00 for the 10-minute study. We used the same exclusion criteria we had determined a priori for Study 1A to ensure that participants responded to the manipulation prompt, and excluded participants who wrote less than 10 words describing the two groups they belong to. This exclusion left a final sample of 99 participants, 51% of them female, with an average age of 26.8 years.

##### *Design and Procedure*

Participants sat at individual computer terminals and followed the instructions that were provided to them on the computer, using the terminal's keyboard and mouse to complete the tasks. The initial procedure was exactly the same as used in Study 1B. All participants began by seeing the same definition of a group, list of examples of groups, and brief explanation of what it means to have high and low status within a group. They were then randomly presented with either the status-inconsistent or the status-consistent manipulation prompts used in Study 1B, and

also instructed to describe the two groups, their status level in them, and how belonging to those groups makes them feel. After providing a short identifying name for each group, they were asked to indicate how much respect, influence, prestige, admiration, and status they felt they had relative to the other members in each group.

The next screen included our dependent variable measure, the Tversky and Hard's (2009) perspective-taking task. Participants were shown a photograph of a person standing behind a desk with a bottle and book in front of him (we include the picture stimuli in Appendix H). They were asked to indicate whether the book was to the left or to the right the bottle (the order in which the two responses were presented was counterbalanced). Respondents are considered to be engaging in perspective-taking when they answer the relative position of the objects from the perspective of the person in the picture (in this case, the left side answer) as opposed to their own perspective (the right side answer), which results in a binary, behavioral measure of perspective-taking.

## **Results**

### *Descriptive Statistics and Manipulation Check*

We began by averaging the respect, influence, prestige, admiration, and status items in each group to compute status scores ( $\alpha = 0.91$ ). We then calculated each participant's "average status" and "status variance" scores across both groups by taking the average of the status scores and the absolute difference between them, respectively.

As expected, the average status of the participants in the status-inconsistent condition ( $M = 4.60$ ,  $SD = 0.96$ ) was not significantly different from the average status of the participants in the status-consistent condition ( $M = 4.93$ ,  $SD = 1.27$ ), ( $b = -0.34$ ,  $t(97) = -1.48$ ,  $p = 0.142$ ). Status variance in the status-inconsistent condition ( $M = 2.61$ ,  $SD = 1.38$ ), however, was significantly

higher than status variance of the participants in the status-consistent condition ( $M = 0.73$ ,  $SD = 0.90$ ), ( $b = 1.88$ ,  $t(97) = 8.07$ ,  $p < 0.001$ ), confirming the effectiveness of our manipulation.

### *Perspective-taking*

We conducted a logistic regression to test whether there were differences in perspective-taking between participants in the two conditions, controlling for the average of the participants' status in the two groups. As predicted in Hypothesis 3B, we find that participants in the status-inconsistent condition ( $M = 0.39$ ,  $SD = 0.09$ ) were significantly more likely to select the other-oriented perspective-taking option (in this case, the left side answer) than those in the status-consistent condition ( $M = 0.22$ ,  $SD = 0.08$ ), ( $b = 0.99$ ,  $t(98) = 2.08$ ,  $p = 0.037$ ). We depict these results in Figure 11.

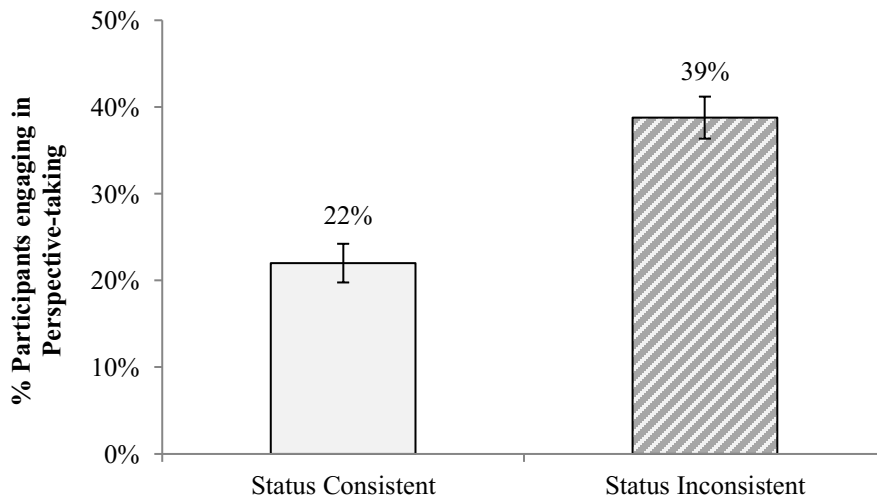


Figure 11: Percentage of participants engaging in perspective-taking across conditions in Study 3B. Error bars represent 95% CI for the group means.

## **Discussion**

Whereas Study 3A showed a correlational relationship between status variance and perspective-taking, Study 3B demonstrated this effect causally. Participants who were randomly

assigned to engage in a recall task focusing on two status-inconsistent groups were significantly more likely to put themselves in the position of another person in a perspective-taking task than those who focused on two status-consistent groups. These results support Hypothesis 3B that status variance, compared with status consistency, improves perspective-taking. Taken together, Studies 3A-B suggest that, although status variance may decrease intrapersonal well-being, the experience of shifting status between groups may have interpersonal benefits, increasing the likelihood of taking another persons' perspective.

### **General Discussion**

Our findings demonstrate that the degree to which people experience status variance across the various groups to which they belong varies across individuals, and that status variance matters – both intrapersonally and interpersonally. Across five studies using survey and experimental methods in both lab and online settings, we find that greater status variance is associated with decreased well-being but increased perspective-taking.

#### **Theoretical implications**

Our findings contribute fundamentally to advancing the status literature, in particular by responding to a generalized call for exploring the dynamic nature of status (Bendersky & Pai, 2018; L. Greer & Bendersky, 2013; Magee & Galinsky, 2008) and bringing attention to a dimension that has received very little attention: how individuals experience their status across the multiple different groups they belong to. Our work suggests that, for a thorough understanding of people's status (and its antecedents and consequences), the literature must consider not only their static – or even dynamic – status level within one group, but also the *aggregate experience* of one's status levels across multiple groups. Broadly, our findings provide

empirical support for the idea that moving from one status experience to another when shifting between groups has profound consequences for well-being and perspective-taking – over and above one’s overall status average.

More specifically, we introduce the concept of status variance as a measure of the degree to which an individual’s status level varies across the various groups she belongs to. We argue for, and find evidence in support of, a double-edged effect on intrapersonal and interpersonal outcomes.

Our research also underscores the importance of meso-level research. Though investigating local, cross-sectional behavioral phenomena can be exacting and precise, researchers often overlook how the same behavioral phenomena may operate across the rich landscape of someone’s whole social life.

Lastly, in building our hypotheses, we connected several disparate-but-related theoretical domains, namely research on multiple identities, self-discrepancy, self-verification, and habit theories. Extending the research on status and social hierarchies to encompass individuals’ aggregate experience of their different groups is an exciting and promising opportunity to establish a tighter relationship with research in other areas, namely multiple identities and multi-team membership.

### **Limitations and directions for future research**

Our methods are limited by several factors that offer fruitful directions for future research. First, while we discuss potential mechanisms that may underlie the effect of status variance on well-being and perspective-taking, we didn’t empirically test them. It was important to establish status variance as a phenomenon by replicating robust main effects. In particular, we consider it to be theoretically relevant to explore and expose both the intrapersonal and

interpersonal consequences of status variance together, as it reveals the complexity and double-edged nature of the phenomena. However, we hope to see future research investigate the psychological and social mechanisms underlying these main effects.

Second, in computing status variance across our studies to identify overall patterns borne from status variance, we implicitly treated all groups as relatively equal in importance to the participant, which is unlikely to be the case in reality. Future research could relax this assumption and tap into the rich diversity of groups that people belong to. We expect the degree to which individuals experience status variance to depend on, for example: how central the group is to an individual's self-views and identity (Thompson & Bunderson, 2001), the amount of time spent with the group (Ollier-Malaterre, Rothbard, & Berg, 2013), the status of the group itself compared to other groups (Chang, Chow, & Woolley, 2017), and the stability of the hierarchy itself within each group (L. L. Greer & Dannals, 2017).

Third, we did not investigate how status variance varies and interacts with demographic differences such as gender, race, or age. We hope future research will uncover these interactions. For example, since women seem to have more diverse goals in life than men (Gino, Wilmoth, & Brooks, 2015), women may be more likely to belong to more diverse groups and, therefore, be more likely to experience status variance. Relatedly, certain psychological and personality traits may exacerbate or attenuate the experience and effect of status variance. Neuroticism, for example, may intensify the effects of status variance, as it is strongly associated with social anxiety and a desire to avoid social disapproval (Bendersky & Shah, 2013; Costa Jr & McCrae, 1992). Self-monitoring may be a particularly interesting moderator. On one hand, high self-monitors are particularly attuned to their social standing and others' expectations, which may intensify the experience of contrast in status levels between groups. On the other hand, however,

their ability to seamlessly regulate their behavior to accommodate social situations may also make high self-monitors more agile in adjusting between different status levels, allowing them to do so with fewer psychological costs.

Lastly, in our studies, we had participants reflect and report on groups they presently belonged to, and conceptualized status variance as the variance in status levels across these co-existent groups. Given the potential for the status hierarchy inside a group to change over time (Bendersky & Shah, 2012; Marr & Thau, 2014; Pettit et al., 2013), an alternative conceptualization of status variance is an individuals' experience of variance in their own status within the same group over time. Future research could explore the intrapersonal and interpersonal consequences of this form of status variance and, ultimately, bring the different pieces together and develop a grand model of status variance across groups and time. Another interesting temporal question to consider is whether the transition costs between highly deviant groups are mitigated over time – as one becomes more practiced in shifting across distinct status levels between groups.

Overall, we believe the main effects uncovered by our work lay the foundations for a promising and important stream of research on status variance.

## **Conclusion**

This work demonstrates the importance of considering the aggregate experience of status across groups – that human social lives are rich, span across complex and distinct groups that change dynamically across contexts – and they are more complex than prior conceptualizations of status suggest. Our work contributes to an ongoing discussion and effort to develop a deeper understanding of the dynamic nature of status. While much work has been devoted to understanding the many different antecedents and consequences of having higher or lower status

in a particular group, in reality, individuals belong to a number of different personal and professional groups. We know surprisingly little about how the potentially different status levels individuals experience across those various groups interact with each other. Looking across the various groups an individual belongs to, we proposed and found evidence that, while status variance is costly in terms of well-being, it facilitates perspective-taking. The double-edged effects of status variance point to the complex yet promising exercise of uncovering how individuals' full experience of status across the various different groups they belong to influences them psychologically and socially in their everyday life.

CHAPTER 3.

DO WE SEE THE SAME HIERARCHY?

STATUS DISAGREEMENT IN MULTICULTURAL TEAMS AND ITS  
CONSEQUENCES FOR TEAM PERFORMANCE

Catarina R. Fernandes

*Harvard Business School*

Sujin Jang

*INSEAD*

## **Abstract**

This paper develops a model of the antecedents and consequences of status disagreement – differing perceptions among team members regarding how much status each member has – in multicultural teams. We test our hypotheses in a study of 783 culturally diverse teams (4,174 participants) collaborating over the course of eight weeks. Integrating the status hierarchy and cultural diversity literatures, we predict and find that status disagreements are more likely to emerge when there is greater diversity in the degree of individualism-collectivism of the national cultures represented in a team. This effect is mitigated, however, when team members have spent time living abroad. Building on research related to team processes and the functional view of status, we also hypothesize and demonstrate that status disagreement harms team performance, and that this effect is mediated by increased coordination problems in the team. Lastly, we find evidence that the negative effect of status disagreement on team performance is strongest in teams whose members come from high power distance cultures. We discuss the theoretical and managerial implications of our findings.

**Do We See The Same Hierarchy?**  
**Status Disagreement In Multicultural Teams And Its**  
**Consequences For Team Performance**

In the context of increasingly global organizations and work arrangements, teams composed of individuals from different cultural backgrounds are becoming ever more prevalent (Hinds, Liu, & Lyon, 2011). Multicultural teams offer various potential benefits, ranging from specialized expertise to enhanced creativity (Stahl, Maznevski, Voigt, & Jonsen, 2010). These multicultural teams, however, often face challenges that arise from deep-seated cultural differences in beliefs, assumptions, and norms that members carry with them (Earley & Gibson, 2002; Gelfand, Erez, & Aycan, 2007). Such differences can hinder team performance by standing in the way of effective coordination within the team.

An important factor that enables effective coordination in teams is the status hierarchy. According to the functional theory of status, a team's status hierarchy facilitates performance by allowing members to coordinate their efforts and have a clear understanding of the division of labor amongst themselves (Halevy et al., 2011; Magee & Galinsky, 2008). Team members who are afforded more status are given greater control and responsibility over the team processes and decisions, which reduces conflict and inefficiencies, and ultimately allows teams to function more effectively (L. Greer, de Jong, Schouten, & Dannals, 2018; L. Greer & van Kleef, 2010; Ronay, Greenaway, Anicich, & Galinsky, 2012). Building on recent work (Kilduff, Willer, & Anderson, 2016), we suggest that these coordinating benefits of the status hierarchy materialize only when team members have the same understanding of what the hierarchy looks like. If team members do not afford high status to the same people, for example, they will defer to different

individuals, which would disrupt the team coordination processes we would otherwise expect, and stand in the way of effective collaboration. Thus, only when team members share the same perception of the status hierarchy should we expect status to play its functional role.

While most of the existing research on status hierarchies has largely assumed that members agree on the distribution of status within the team (for exceptions, see: Bendersky & Hays, 2017; Kilduff et al., 2016), we argue that this consensus regarding the hierarchy should not be assumed in the context of multicultural teams. More specifically, we posit that members of multicultural teams are likely to have dissimilar associations related to status and, as a result, distribute status among team members differently. Recent work has suggested that people from distinct cultures may indeed perceive and respond to hierarchies differently (Bendersky & Pai, 2018; Bunderson & Van der Vegt, 2018). Scholars have found, for example, that the characteristics that people associate with status differ across individualistic and collectivistic cultures (Torelli, Leslie, Stoner, & Puente, 2014), and that the extent to which members accept a group's hierarchy is contingent on their culture's acceptance of power distance (Anicich et al., 2015).

What happens, then, when individuals with these different cultural backgrounds come together to collaborate within a single team? Given that they have distinct understandings of the types of characteristics and behaviors that deserve high or low status (Torelli et al., 2014), we suggest that people from different cultures are likely to differ in how much status they afford to the same individual. Taken to the group level, we argue that such differences are likely to result in *status disagreements* – differing perceptions among team members regarding how much status each member has (Kilduff et al., 2016). Although recent studies have examined the outcomes of status disagreement within culturally homogenous contexts (Bendersky & Hays, 2017; Kilduff et

al., 2016), we have yet to understand the factors that shape the emergence and impact of status disagreement in multicultural teams.

In this paper, we integrate the status hierarchy and cultural diversity literatures to develop and test a model of the antecedents and consequences of status disagreement in multicultural teams. We identify two key factors that affect the likelihood that status disagreement will emerge: diversity in the degree of individualism versus collectivism among team members' national cultures, and the average time that members have spent living outside of their country of origin. Further, we argue that the resulting status disagreement creates coordination problems, ultimately harming performance. Lastly, we suggest that the effect of status disagreement on team performance is moderated by the degree to which the national cultures represented in the team accept power distance. We test our hypotheses in a study of 783 multicultural teams (4,174 participants) working together over eight weeks, and find overall support for our model.

In drawing these distinctions, we contribute to the literatures on social hierarchy and multicultural teams in four significant ways. First, we advance understanding of multicultural team functioning by identifying a prevalent and important feature of status hierarchies in this context – status disagreements. Second, we highlight key factors that affect the emergence and impact of status disagreement in multicultural teams, with important implications for team composition. Third, we provide empirical evidence that supports recent proposals to challenge the prevalent assumption of status consensus in teams. Lastly, we demonstrate how, and under what conditions, status disagreement harms team performance, enriching our understanding of the functional role of status.

## **Theoretical Background And Hypotheses**

Status is defined as the relative level of respect, prominence, and esteem that an individual possesses in the eyes of others (Anderson et al., 2001). An important aspect of status, which distinguishes it from other related constructs such as power, is that it is socially conferred (Blader & Chen, 2012). That is, an individual only has status to the extent that others recognize him or her as being deserving of influence, respect and prominence. Status characteristics theory (Berger et al., 1972; C. Ridgeway, 1982) asserts that status emerges from expectations that individuals have for their own and each other's performance, ability, and motivation to contribute to the group's task. In other words, team members attribute status to others based on the extent to which they perceive them as possessing characteristics or traits they associate with the ability to perform effectively in a given context (Berger et al., 1972; Bunderson, 2003; Magee & Galinsky, 2008). In attributing status, each team member is thus, either conscious or unconsciously, making an assumption as to which individual characteristics are most valuable, and allocating different levels of status according to the extent to which they perceive each team member to possess those valued characteristics.

Although a predominant assumption in extant theories of status is that there is an implicit consensus among group members regarding the hierarchy (Anderson & Brown, 2010; Anderson et al., 2006; Berger et al., 1972; Kenny, Horner, Kashy, & Chu, 1992; Magee & Galinsky, 2008), recent studies have begun to challenge this view. For example, Kilduff and colleagues (2016) found that "upward disagreements", or instances where two group members each view their own status as being higher than the other, are harmful for team performance. Meanwhile, Bendersky and Hays (2017) found that in teams that experience initial status disagreement, status conflict (i.e., overt disputes over team members' status) can allow teams to converge on their view of the

hierarchy, improving team performance. These studies provide important evidence that team members do not always agree on the status hierarchy, and that such disagreements can impact team performance. However, the domain of these studies is limited to teams operating within the context of a single culture. Meanwhile, we have yet to understand how cultural factors might shape the emergence and impact of status disagreement in multicultural teams.

### **Cultural Antecedents to Status Disagreement**

One's cultural background is an important source of the beliefs that underlie one's status expectations and judgments. According to status characteristics theory, the performance expectations that team members develop about one another are informed by the social meaning they attribute to one another's personal characteristics (Balkwell, 1994; Berger, Rosenholtz, & Zelditch, 1980; Bunderson, 2003). These associations that individuals make between personal characteristics and task competence or ability are learned through socialization in a broader culture – be it society, an industry, a profession, or a specific organization (Bunderson, 2003). Drawing on previous work (Anderson, Spataro, & Flynn, 2008; Berger et al., 1980; Fragale, 2006), we argue that the determinants of status are not universal, but culturally contingent. That is, while individuals within a given culture are more likely to share the same view of which characteristics and behaviors are valued, respected, and admired (i.e., what is considered high status), people across cultures are likely to differ in their views of which characteristics and behaviors merit high versus low status (Brown, Bulte, & Zhang, 2011; Schwartz, 1999; Torelli et al., 2014).

In multicultural teams, we posit that the extent to which members experience status disagreement will be determined not by surface-level differences in nationality, but by deeper, underlying differences related to cultural beliefs (Harrison, Price, & Bell, 1998). Specifically,

building on the work of Torelli and colleagues (2014), we focus on the individualism-collectivism spectrum as a key dimension of a team's underlying diversity, with implications for status perceptions. The individualism-collectivism spectrum is a core dimension along which national cultures are characterized (Hofstede, 1980; Singelis, Triandis, Bhawuk, & Gelfand, 1995), and particularly relevant for status perceptions, as it shapes the characteristics and behaviors that are valued in a given culture and thus associated with status (Torelli et al., 2014). In highly individualistic cultures, constituents are encouraged to be unique and express themselves. Individuals from these cultures are socialized to value personal achievement, independence, and autonomy. Conversely, in highly collectivistic cultures, constituents are encouraged to fit in and behave in socially appropriate ways. Individuals from these cultures are socialized to value interdependence, group harmony, and collective goals (Hofstede, 1980; Markus & Kitayama, 1991; Singelis et al., 1995). These differences have important implications for the characteristics and behaviors associated with status in different cultures.

Specifically, Torelli and colleagues (2014) found that cultural orientation shapes the determinants of status, such that people higher on individualism associate status with competence, whereas those higher on collectivism associate status with warmth. Across four studies, the authors found that these associations influenced people's perceptions of high status individuals as competent versus warm, as well as their tendency to ascribe status to others based on competence versus warmth. These associations also impacted people's status seeking behaviors; to attain status, those from individualistic cultures engaged in behaviors that signal competence, while those from collectivistic cultures engaged in behaviors that signal warmth. In short, the differing associations of status held by members of individualistic versus collectivistic

cultures led people to ascribe status to different people, infer different things about those with high status, and engage in different behaviors to gain status.

These cross-cultural differences have important implications for multicultural teams. Within multicultural teams, we posit that members from individualistic versus collectivistic cultures are likely to come to different conclusions regarding how much status each team member should be afforded. In aggregate, this would result in team members having different perceptions of the team's status hierarchy. Indeed, the work by Torelli and colleagues (2014) suggests that both differing perceptions of how much status each member has and different behaviors to signal status could contribute to status disagreement at the team level. When it comes to perceiving status, team members from more individualistic cultures are likely to look for competence-related cues to infer status, while members from more collectivistic cultures would look for warmth-related cues. Similarly, when it comes to signaling status, those from collectivistic cultures are likely to engage in behaviors that signal warmth, whereas those from individualistic cultures are likely to put their efforts toward signaling competence. As a result of both of these processes, the team as a whole would end up experiencing status disagreement.

In sum, because individuals are likely to differ in how they perceive and signal status based on their home countries' position along the individualism-collectivism spectrum, we posit that greater diversity in this dimension will lead to greater status disagreement within the team.

*Hypothesis 1 (H1): The greater the diversity in the level of individualism-collectivism of team members' home countries, the greater the status disagreement within the team will be.*

While we expect diversity along the individualism-collectivism spectrum at the team level to lead to greater status disagreement, we posit that diversity of cultural experiences *within* each individual team member will moderate this effect. Specifically, we focus on cross-cultural experience, or one's experience living in foreign countries, as this type of experience has been associated with an internalization of multiple mental models beyond simply traveling abroad or accumulating multicultural experiences within one's country of origin (Maddux & Galinsky, 2009). An increasing number of individuals in organizations have cross-cultural experience, and many of them even identify with more than one culture (Benet-Martínez, Lee, & Leu, 2006; Hong, Morris, Chiu, & Benet-Martínez, 2000). This within-person cultural diversity is theoretically important as it has significant implications for how one thinks about status and, ultimately, to what extent status disagreement emerges in a team.

Those with more cross-cultural experience are likely to have greater cognitive flexibility, because their exposure to multiple cultural frameworks allows them to see that there is more than one way of thinking about a given topic (Benet-Martínez & Haritatos, 2005; Benet-Martínez et al., 2006; Maddux & Galinsky, 2009). They are also more likely to be able to adapt their behavior across different cultural contexts (Nguyen & Benet-Martínez, 2007). Furthermore, cross-cultural experience is associated with higher levels of cultural metacognition, the ability to think about one's cultural assumptions (Brannen, Garcia, & Thomas, 2009), and could therefore allow individuals to reflect on their assumptions about status. Taken together, we posit that cross-cultural experience will lead to greater awareness of the cues that different cultures associate with status, as well as increased flexibility in applying different mental models when thinking about status.

In a team context, this means that members with more cross-cultural experience are likely to be less rigid in their views of status, such that they are able to interpret status cues in a way that is more consistent with the intentions of those emitting the cues. They are also more likely to be able to communicate their own status with cues that are meaningful to others from different cultures. In short, we predict that the average level of cross-cultural experience in a team will moderate the relationship between individualism-collectivism diversity and status disagreement, such that the relationship is weaker when team members have higher levels of cross-cultural experience.

*Hypothesis 2 (H2): Team members' average level of cross-cultural experience moderates the effect of individualism-collectivism diversity on status disagreement, such that higher levels of average cross-cultural experience weakens the effect of individualism-collectivism diversity on status disagreement.*

### **Consequences of Status Disagreement**

One of the challenges of working in teams is that members must coordinate individual behavior in such a way that they are working in sync toward their collective goals (Anderson & Brown, 2010). The functional view of status posits that the status hierarchy plays a key role in facilitating this coordination in a team and, as a result, in promoting team performance (Halevy et al., 2011). Having a clear status hierarchy clarifies the division of labor, specifying who does what and when (Magee & Galinsky, 2008). This allows everyone on the team to know what is expected of them and enables them to perform accordingly. For the status hierarchy to play this functional role, however, team members must have a consensual understanding of each group member's position in the hierarchy (Anderson & Kilduff, 2009a; Fiske, 2010; Gruenfeld & Tiedens, 2010). That is, the contribution that the status hierarchy makes towards team

performance is contingent on the underlying agreement among team members in regards to the status hierarchy itself. What happens, then, in the presence of status disagreements?

If team members have different perceptions of how status is distributed among themselves, they will have different understandings about the allocation of roles and responsibilities (Kilduff et al., 2016). Different team members will defer and look to different individuals for guidance. This means the division of labor and control over resources is no longer allocated seamlessly – the different team members’ contrasting expectations will generate coordination problems, which could manifest as conflict or continued discussions over the distribution of workload. Importantly, these inefficient processes would take place regardless of whether the team members are consciously aware of their differing status perceptions. Ultimately, the time and effort that is taken away from the team’s main activity to handle these different perspectives, as well as the potential negative impact the conflict may have on team members’ relationships, would harm performance (Bendersky & Hays, 2012, 2017). In sum, we posit that status disagreement among team members creates coordination problems, with negative consequences for team performance.

*Hypothesis 3 (H3): Greater status disagreement within the team will lead to lower team performance.*

*Hypothesis 4 (H4): The effect of status disagreement on team performance will be mediated by coordination problems in the team.*

### **How Culture Moderates the Effect of Status Disagreement on Team Performance**

Teams can vary in the extent to which they rely on the status hierarchy for the division of roles and responsibilities among its members (Anicich et al., 2015). When team members accept that hierarchical differentiations between individuals are natural and even desirable, their

expectations and attitudes toward their peers are likely to conform strongly to the stratification implied by the status hierarchy. In other words, the status hierarchy will be a key input for coordinating and assigning the different roles and responsibilities within such teams (Halevy et al., 2011; Kwaadsteniet & Dijk, 2010). When team members are prone to challenging the very notion of hierarchical differentiation, and instead believe that roles and responsibilities ought to be assigned more equitably across hierarchical levels, the hierarchy is likely to play a smaller role in informing the team's processes and dynamics (Lammers, Galinsky, Gordijn, & Otten, 2008).

Power distance represents the extent to which individuals in a society accept an unequal or steep hierarchical order (Anicich et al., 2015; Hofstede, 1980). When an individual comes from a high power distance culture, he or she is more likely to abide by and rely on the team's status hierarchy – whatever it may look like from his or her perspective. In contrast, when an individual is from a low power distance culture, he or she is less likely to abide by the status hierarchy that he or she perceives in the team.

Taken to the team level, we thus posit that the impact of status disagreement on team performance is contingent on the extent to which team members accept and rely on the team's hierarchy. More specifically, we predict that when team members on average come from high power distance cultures, they will be more accepting of and reliant on the status hierarchy they perceive. Given their dependence on the status hierarchy, status disagreement in such teams is likely to generate contrasting role or process expectations, magnifying the detrimental effects of status disagreement. Conversely, when team members come from low power distance cultures, they are less likely to depend on the status hierarchy they see; therefore, any incongruent perceptions of how status is distributed in the team will not be as salient and may not materialize

in any impactful way. In sum, we predict that the average power distance of team members' cultures will moderate the effect of status disagreement on performance, such that the effect will be strongest in teams with members from high power distance cultures.

*Hypothesis 5 (H5): Status disagreement will be most harmful for performance in teams whose members come from high power distance cultures.*

Figure 12 depicts the full theoretical model implied by the presented set of hypotheses.

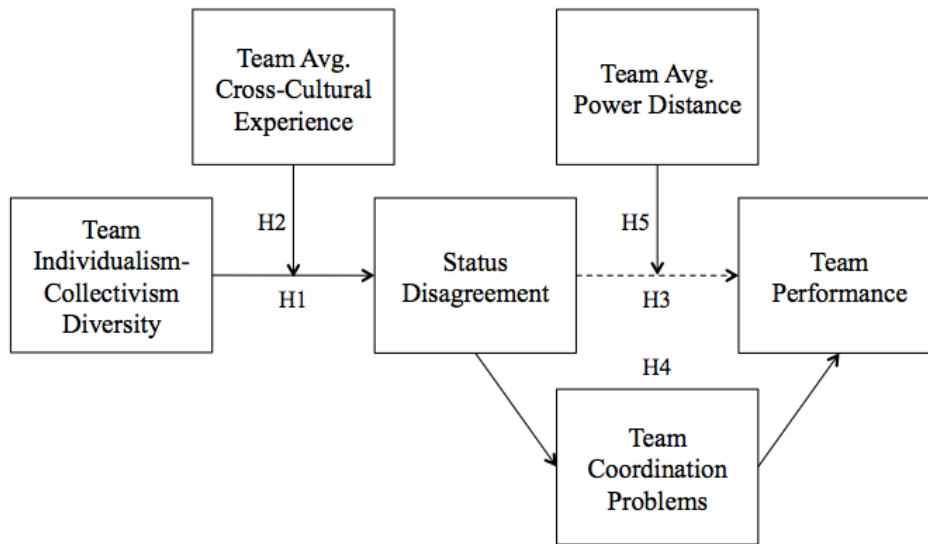


Figure 12: Full model of hypothesized relationships

### Method

We test our hypotheses using a dataset of 783 teams (4,174 individuals). The data come from a major global student collaboration project (see Taras, Muth, & Gitlin, 2013 for an overview of the project), which brings together students from different countries to collaborate in global virtual teams over the course of eight weeks. These data provide a unique opportunity to study status disagreement and its effect on team performance across a large number of multicultural teams working on the same task.

## Sample

All data were collected during two waves of the project conducted in the Fall semester of 2017. The original dataset included 852 teams (4,705 individuals). Before analyzing the data, we excluded teams where status ratings were missing from more than one member ( $N = 68$ ), given the importance of status ratings in testing our hypotheses. Given that our domain of interest is multicultural teams, we removed one team in which all team members came from the same home country ( $N = 1$ ). The remaining dataset included 783 teams (4,174 individuals). All of the analyses below were conducted with this final dataset. As a robustness check, we also performed the analyses with the original full dataset; this yields the same pattern and significance of results.

Of the 4,174 participants, 51% of them were women, and on average they were between 23-25 years old. Participants came from 135 different universities across 125 countries. The final set of 783 teams had, on average, 5.33 members each. Teams were highly diverse, with an average Blau index based on team members' home country of .73 ( $SD = .07$ ). In 97.1% of the teams, less than half of the team members came from the same country, and in 14.4% of the teams every team member was from a distinct country. No two team members in any given team were from the same university or shared the same instructor. See Table 5 for a summary of key individual and team-level variables.

Table 5: Key individual and team-level variables

	Total	Wave a	Wave b
<i>Individual-level</i>			
Number of participants	4,174	798	3,376
Percent female	50.8%	52.4%	50.4%
Age			
Most represented age group	23-25 (63.6%)	20-23 (51.7%)	23-25 (73.5%)
Second most represented age group	20-23 (22.9%)	17-20 (33.0%)	20-23 (17.6%)
Number of countries represented	125	43	121
Number of universities represented	135	29	110
Number of instructors represented	144	34	114
<i>Team-level</i>			
Number of teams	783	143	640
Team size			
Average	5.33	5.58	5.28
Range	3-8	3-8	3-8
Blau index based on home country			
Average	.73	.69	.74
Standard deviation	.07	.08	.06
Minimum	.38	.38	.44
Maximum	.86	.82	.86
Percent of teams with:			
Max. one team member from each country	14.4%	1.4%	17.3%
Max. 33% representation of a single country	43.4%	39.2%	44.3%
Max. 50% representation of a single country	97.1%	90.2%	98.6%

## **Team Task**

The team task was to propose the “next big idea” for a company of their choice, and to present a corresponding business plan to implement the idea. Given the geographical separation between members, all teams interacted virtually. Participants reported interacting with their team members an average of 5.1 hours per week, including over video-conferencing, email, and instant messaging. For most participants, the project was a major component of the courses in which they were enrolled, with the final project evaluation contributing an average of 31% of the students’ final course grade. The interdependent nature of the task, as well as the fact the project had meaningful consequences for the participants, created a rich context in which to study status perceptions within each team.

## **Measures**

The data come from two primary sources: (1) surveys completed by participants and (2) evaluations from faculty members supervising the projects. The participants were surveyed at several points over the course of the 8-week project. A survey before teams were assigned (“pre-project survey”) collected participants’ demographic information and background. A second survey at the end of the first week of the project (“week 1 survey”) gathered participants’ round-robin status ratings, and another survey at the end of the third week (“week 3 survey”) captured each team’s leadership structure. A final survey at the end of the project (“final survey”) included measures of how participants organized and coordinated themselves as a team. At the end of the semester, after all participants had completed the final survey, each team received evaluations of their project from the faculty members affiliated with the team.

*Status disagreement.* We measured status disagreement using participants’ round robin ratings from the week 1 survey. Participants rated themselves as well as each of their team members on

how much status, influence, and respect they perceived them to have on a 5-point scale (Anderson et al., 2001). We averaged the ratings across the three items ( $\alpha = .86$ ) to compute a composite status rating score for each rater-target pair ( $M = 3.98$ ,  $SD = .81$ ).

Following previous research (Bendersky & Hays, 2017; Kilduff et al., 2016), we calculated status disagreement through a two-step process. First, we took the composite status rating scores that each participant received and calculated the within-team agreement index ( $r_{WG}$ ; James, Demaree, & Wolf, 1984) for each participant ( $M = .75$ ,  $SD = .22$ ). The  $r_{WG}$  score is a measure of relative consistency in ratings provided by multiple judges of multiple targets that compares the observed within-group variances to an expected variance under the null hypothesis of no agreement. A score of 1 indicates complete agreement and 0 no agreement (i.e., random responses). We then aggregated these individual-level measures to the team level by taking the average of the  $r_{WG}$  scores across team members; this gave us the average level of status agreement in the team. Finally, to capture status *disagreement*, we subsequently subtracted the status agreement measure from 1. Thus, our status disagreement measure ranges from 0 (indicating complete agreement) to 1 (indicating complete disagreement).

The average level of status disagreement in the teams was  $M = .25$ , with a standard deviation of  $SD = .17$ . We found that 32.3% of the teams had a status disagreement score above .30 (see Figure 13 for a histogram of status disagreement in the sample), which is the standard threshold for what is considered a high level of within-team disagreement (James, 1988; Lance, Butts, & Michels, 2016).

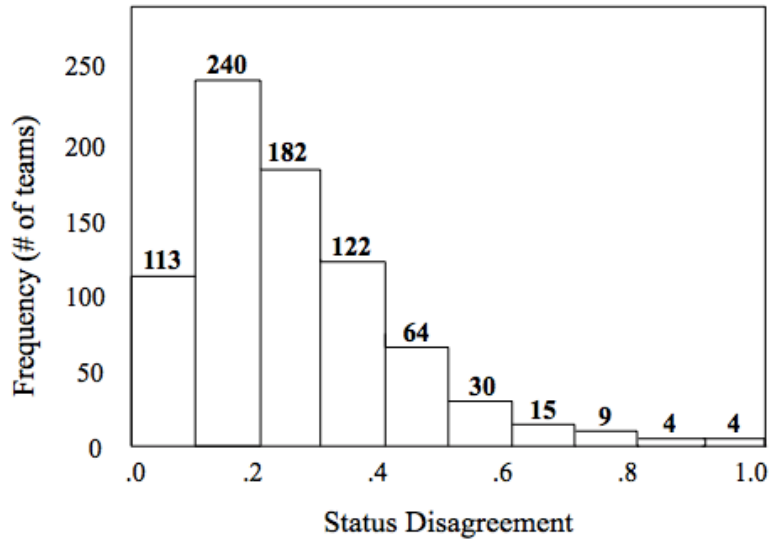


Figure 13: Frequency of status disagreement in teams

We chose to compute status disagreement with the  $r_{WG}$  score, following the procedure adopted in previous studies related to status disagreement (Bendersky & Hays, 2017; Kilduff et al., 2016). As a robustness check, we also calculated status disagreement using the Intraclass Correlation (ICC) computation, and also the team’s average standard deviation of the status ratings each target-individual received from his or her team members. Using both of these alternative measures of status disagreement, we find the same pattern and significance of results in all our models.

*Team individualism–collectivism diversity*

Based on participants’ indication of their home country in the pre-project survey, we obtained the individualism–collectivism scores for each country in our dataset from the Hofstede Insights online database (<https://www.hofstede-insights.com/product/compare-countries/>). This database includes scores for 101 countries on a 100-point scale, where low levels indicate a greater individualistic orientation and higher levels a greater collectivistic orientation. Of the 125

different home countries represented in our sample, 81 of them were available in the Hofstede database. These represented the home countries of 95.1% of the total 4,174 participants in our sample. In 30 of the 783 teams, more than one team member's home country was missing from the Hofstede database, so we excluded those teams from the analyses related to individualism-collectivism diversity (remaining  $N = 753$ ). As we were interested in the degree of dissimilarity among team members along the individualism-collectivism spectrum, which corresponds to Harrison and Klein's (2007) concept of "separation", we followed their recommendation of calculating our variable of interest as a standard deviation. Taking the set of 753 teams, we calculated both the standard deviation ( $M = 33.21$ ,  $SD = 6.78$ ) of their individualism-collectivism scores, as well as the average ( $M = 54.12$ ,  $SD = 10.37$ ).

#### *Team average cross-cultural experience*

Participants reported in the pre-project survey how much time they had spent working and studying in a foreign country on a 7-point scale ranging from 1 = none to 7 = 4+ years. We added each participant's time working and studying abroad to compute their total time spent abroad, and then calculated the average across all members in each team ( $M = 1.93$ ,  $SD = .60$ ).

#### *Team performance*

At the end of the semester, each student received a 1-7 rating evaluation of the overall quality of the team's final project from his or her faculty member. For each team, the average of the overall evaluation scores provided by all associated faculty members served as the final measure of team performance ( $M = 4.97$ ,  $SD = .80$ ).

#### *Team average power distance*

Using the home country information participants provided in the pre-project survey, we obtained power distance scores for each country in our dataset. Power distance is rated on a 100-

point scale, where low levels indicate less acceptance of power distance and higher levels indicate greater acceptance of power distance. As was the case with the individualism-collectivism measure, in 30 of the 783 teams, more than one team member's home country was missing from the Hofstede database; these teams were excluded from the analyses related to power distance (remaining  $N = 753$ ). Given our focus on the extent to which team members accept a hierarchical differentiation between individuals, we calculated the average level of power distance in each team; we also calculated the standard deviation of power distance in each team as a control variable ( $M = 58.2$ ,  $SD = 7.02$ ).

#### *Team coordination problems*

In the final survey (before receiving any feedback or grades related to the project or the course), participants were asked to answer "How much of a problem did distributing the workload among the team members represent for the team?" on a 5-point scale ranging from 1 = No problem to 5 = Big problem. We subsequently calculated the average rating across all members in each team ( $M = 2.37$ ,  $SD = .75$ ).

#### *Control variables*

We conducted several versions of each analysis with different sets of controls. Across all analyses, we present an "a" version with a primary set of controls, a "b" version that also controls for an additional set of variables, and a "c" version with no controls.

In the "a" version, we controlled for a number of variables that could impact status disagreement or team performance. First, we controlled for team size in all analyses with variables captured at the individual-level that were subsequently aggregated to the team-level. Second, given that generalized high status ratings within a team would result in low levels of status disagreement and also potentially be related to higher levels of team performance, we

controlled for the average status ratings in the team in all models that included status disagreement. Third, we controlled for the average of the teams' individualism-collectivism scores whenever we included their standard deviation, and for the standard deviation of the teams' power distance scores whenever we included this average.

In addition to these primary control variables, we also included an additional set of controls in the "b" version of the regressions. First, given that team gender composition is often related to team performance (e.g.: Woolley, Chabris, Pentland, Hashmi, & Malone, 2010), and that participants' level of involvement and motivation towards the team's goals are likely influenced by the relative importance of the project, we controlled for percentage of female team members and the average of the team members' grade percentage that was determined by the team project in the models related to team performance. Second, in our model predicting status disagreement from individualism-collectivism diversity, we included as additional controls the standard deviation of all the other Hofstede cultural dimensions (power distance, masculinity-femininity, uncertainty avoidance, long-short term orientation, and indulgence-restraint). Lastly, we controlled for the teams' home country Blau index in all models related to cultural dimensions (individualism-collectivism diversity, cross-cultural experience, and power distance).

### **Analyses**

Although there were no particular differences between the two waves in which the data was collected, we conducted all of our analyses with linear mixed-effects models to account for the multilevel nature of the data, in which teams are nested within waves (lmer function from the lme4 package in R, with fixed-effects for wave).

## Results

Table 6 provides the means, standard deviations, and pairwise correlations for all the variables in the study.

Table 6: Means, standard deviations, and correlations of key variables

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Status Disagreement	.25	.17											
2. Team Individualism-Collectivism Diversity	33.44	6.72	.09*										
3. Team Average Individualism-Collectivism	54.26	10.25	-.05	.23**									
4. Team Average Cross-Cultural Experience	1.93	.61	.11**	.37**	-.01								
5. Team Performance	4.97	.84	.12**	.05	-.02	.07*							
6. Team Average Power Distance	58.04	7.06	-.04	.39**	.48**	.36**	-.05						
7. Team Coordination Problems	2.37	.75	.10**	.08*	.03	-.08*	.11**	.14**					
8. Team Size	5.33	.74	.02	.11**	.15**	.07*	-.05	.18**	.04				
9. Team Average Status Ratings	3.97	.39	.19**	-.03	-.08*	.07*	.15**	.05	.16**	-.03			
10. Team Female Percentage	.51	.23	-.04	.04	-.08*	.01	.12**	-.02	-.05	-.08*	.04		
11. Team Average Grade Percentage	.31	.08	.02	.15**	.03	.16**	.02	.10**	-.04	.02	-.01	-.01	
12. Team Blau Index (Home Country)	.73	.07	.01	-.07	.10**	.14**	.00	.23**	.01	.58**	.00	-.07	.10**

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001

Below we present the regression results from the models testing Hypotheses 1 to 5. All regressions include fixed effects for wave. Across all models, we present an “a” version with a primary set of control variables, a “b” version that also controls for an additional set of variables per the explanation outlined in the “control variables” section above, and a “c” version with no controls.

Table 7 presents the regression results from the models testing Hypotheses 1 and 2, regarding the factors that increase or decrease status disagreement. As predicted in Hypothesis 1, we find that greater diversity along the individualism-collectivism spectrum results in greater status disagreement (Models 1a-c in Table 7). Model 1a shows that greater individualism-collectivism diversity predicts higher levels of status disagreement, controlling for team size and average status ratings ( $b = .002$ ,  $t(748) = 2.13$ ,  $p = .034$ ). As Model 2b shows, the effect remains significant when controlling for the team’s diversity level (measured as the standard deviation) along all the other Hofstede cultural dimensions (power distance, masculinity-femininity, uncertainty avoidance, long-short term orientation, and indulgence-restraint), as well as the home country Blau index ( $b = .002$ ,  $t(742) = 2.19$ ,  $p = .029$ ). Notably, we find that diversity in individualism-collectivism, but not other cultural dimensions, predicts status disagreement. Finally, the effects remain significant when the regression is conducted without any controls ( $b = .002$ ,  $t(751) = 2.60$ ,  $p = .009$ ), as shown in Model 1c. Overall, these results suggest that teams composed of members whose cultures are more diverse in the level of individualism-collectivism experience greater levels of status disagreement.

Next, Hypothesis 2 predicts that team average cross-cultural experience will moderate the effect of individualism-collectivism diversity on status disagreement by decreasing the strength of the relationship. In Table 7, Model 2a shows that indeed the interaction between team average

cross-cultural experience and individualism-collectivism diversity has a significant effect on status disagreement, controlling for team size and team average status ratings ( $b = -.003$ ,  $t(746) = -2.16$ ,  $p = .031$ ). Figure 14 depicts this interaction graphically, including significance levels resulting from the simple slopes analysis. It shows that the effect of individualism-collectivism diversity on status disagreement is only significant when team members have low levels of cross-cultural experience ( $p = .023$ ); when team members have average ( $p = .160$ ) or high levels of cross-cultural experience ( $p = .722$ ), the effect is not significant. Model 2b in Table 7 shows that this interaction effect is robust to controlling for the home country Blau index ( $b = -.003$ ,  $t(745) = -2.16$ ,  $p = .031$ ), and Model 2c shows that the effect is in the expected direction but loses significance when there are no controls ( $b = -.002$ ,  $t(749) = -1.51$ ,  $p = .131$ ). Taken together, these results support Hypothesis 2 and suggest that when team members have more cross-cultural experience, the team's individualism-collectivism diversity is less likely to result in status disagreement.

Table 7: Results from linear mixed-effects models predicting status disagreement

	Models					
	1a	1b	1c	2a	2b	2c
Team Individualism-Collectivism Diversity	.002*	.002*	.002**	.007*	.007*	.006†
	(.001)	(.001)	(.001)	(.003)	(.003)	(.003)
Team Average Individualism-Collectivism	-.001	-.001		-.001	-.001	
	(.001)	(.001)		(.001)	(.001)	
Team Average Cross-Cultural Experience				.074	.074	.042
				(.048)	(.048)	(.048)
Team Average Cross-Cultural Experience X Team Individualism-Collectivism Diversity				-.003*	-.003*	-.002
				(.001)	(.001)	(.001)
Team Average Status Ratings	-.082***	-.081***		-.082***	-.082***	
	(.015)	(.015)		(.015)	(.015)	
Team Size	.005	.005		.006	.006	
	(.008)	(.010)		(.008)	(.010)	
Power Distance Diversity		-.002				
		(.002)				
Masculinity-Femininity Diversity		.001				
		(.001)				
Uncertainty Avoidance Diversity		.000				
		(.002)				
Long-Short Term Orientation Diversity		.000				
		(.001)				
Indulgence-Restraint Diversity		.000				
		(.001)				
Team Blau Index (Home Country)		-.004			-.023	
		(.114)			(.110)	
Intercept	.523***	.544***	.176***	.398**	.388**	.114
	(.101)	(.124)	(.030)	(.142)	(.149)	(.109)
N	753	753	753	753	753	753
Fixed effects wave	Yes	Yes	Yes	Yes	Yes	Yes

Unstandardized regression coefficients are reported, with standard errors in parentheses.

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001

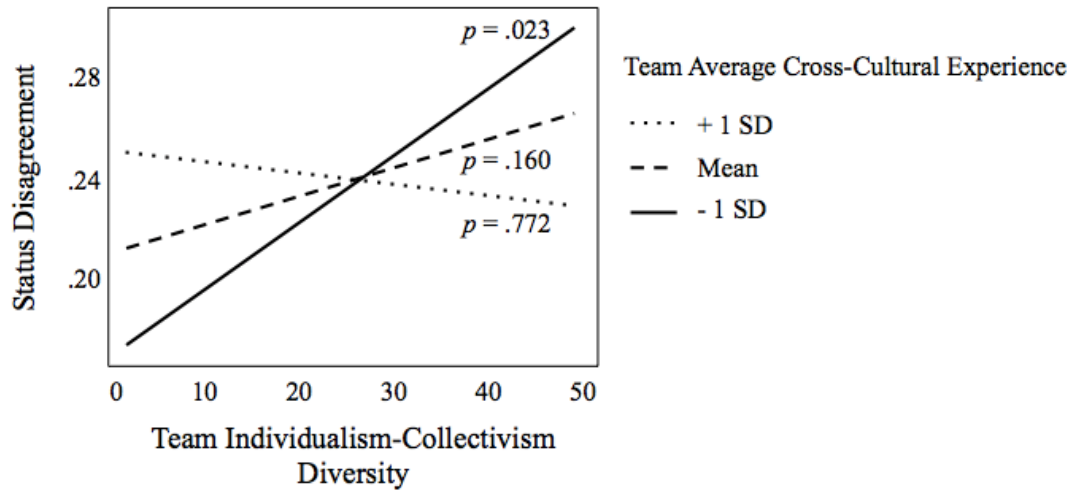


Figure 14: Interaction effect of team average cross-cultural experience and team individualism-collectivism diversity on team performance, including significance results from simple slopes analysis

Hypothesis 3 asserts that status disagreement will have a negative impact on team performance. Models 3a-c in Table 8 present the results of the regressions testing this hypothesis. As predicted, we find that status disagreement does indeed lower team performance, controlling for team size and team average status ratings ( $b = -.493$ ,  $t(775) = -2.71$ ,  $p = .007$ ), as shown in Model 3a. Model 3b shows that the effect is robust to also controlling for female percentage and average grade percentage dependent on the project ( $b = -.480$ ,  $t(773) = -2.65$ ,  $p = .008$ ), and Model 3c shows that it remains significant without any controls ( $b = -.626$ ,  $t(777) = -3.47$ ,  $p < .001$ ). These results provide robust evidence that when team members disagree about the distribution of status in the team, team performance is lower.

Table 8: Results from linear mixed-effects models predicting team performance

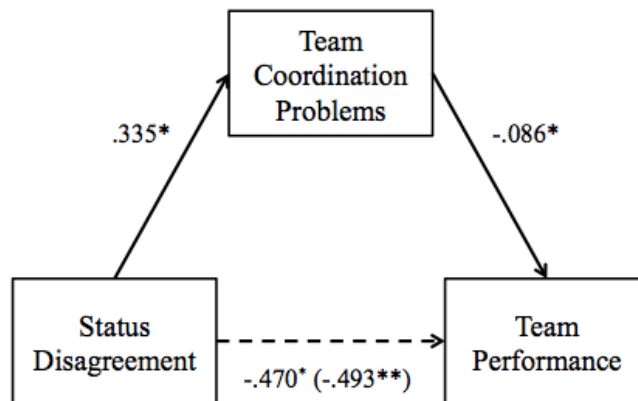
	Models		
	3a	3b	3c
Status Disagreement	-.493** (.182)	-.480** (.181)	-.626*** (.180)
Team Average Status Ratings	.286*** (.077)	.280*** (.077)	
Team Size	-.045 (.040)	-.036 (.040)	
Team Female Percentage		.395** (.130)	
Team Average Grade Percentage		.322 (.390)	
Intercept	4.203*** (.388)	3.873*** (.411)	5.132*** (.055)
N	779	779	779
Fixed effects wave	Yes	Yes	Yes

Unstandardized regression coefficients are reported, with standard errors in parentheses.

†  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

In Hypothesis 4 we predicted that status disagreement would harm performance by creating coordination problems in the team. Figure 15 depicts the mediation model visually, and Table 9 shows the results of the regressions from the mediation analysis (Baron & Kenny, 1986). As had been found in our test of Hypothesis 3, Model 3a shows a significant negative total effect (c) of status disagreement on team performance, controlling for team size and team average status ratings ( $b = -.493$ ,  $t(775) = -2.71$ ,  $p = .007$ ). Model 4a shows that coordination problems, in turn, have a negative effect on team performance ( $b = -.095$ ,  $t(774) = -2.33$ ,  $p = .020$ ). Model

5a tests the significance of the coefficient for the effect of the independent variable on the proposed mediator (a), confirming that status disagreement leads to coordination problems ( $b = .335, t(779) = 2.07, p = .039$ ). Finally, Model 6a shows that when both coordination problems and status disagreement are included in the model predicting team performance, the coefficient for the effect of coordination problems (b) is significant ( $b = -.086, t(773) = -2.13, p = .034$ ), and the direct effect of status disagreement (c') is less significant than the total effect ( $b = -.470, t(773) = -2.57, p = .010$ ). Most importantly, following Preacher & Hayes' (2004) procedure, we confirm that the 95% bias-corrected confidence interval for the indirect effect, calculated with 5,000 bootstraps, does not include zero: 95% CI = [-.091, -.004]. Also in Table 9, Models 3b-6b show that the results are robust to controlling for female percentage and average grade percentage determined by the project (95% CI = [-.086, -.002]), and Models 3c-6c that the results remain significant when no controls are included in the models (95% CI = [-.120, -.013]). Overall, these results provide support for the mediating role of coordination problems on the relationship between status disagreement and team performance, as stated in Hypothesis 4.



Indirect effect 95% CI (5,000 bootstraps) = [-0.091, -0.004]

Figure 15: Mediated effect of status disagreement on team performance through team coordination problems

Table 9: Results from linear mixed-effects models predicting mediating effect of team coordination problems on team performance

Dependent Variable	Models											
	3a	4a	5a	6a	3b	4b	5b	6b	3c	4c	5c	6c
Status Disagreement	-.493** (.182)		-.335* (.162)	-.470* (.183)	-.480** (.181)		-.333* (.162)	-.459* (.182)	-.626*** (.180)		-.458** (.160)	-.581** (.181)
Team Coordination Problems		.095* (.041)		.086* (.041)		.088* (.040)		.080* (.040)		.121** (.040)		.108** (.040)
Team Average Status Ratings	.286*** (.077)	.300*** (.077)	.267*** (.068)	.265*** (.078)	.280*** (.077)	.295*** (.077)	.266*** (.068)	.261*** (.077)				
Team Size	-.045 (.040)	-.043 (.040)	-.030 (.035)	-.041 (.040)	-.036 (.040)	-.034 (.040)	-.031 (.035)	-.033 (.040)				
Team Female Percentage					.395** (.130)	.390** (.130)	.129 (.116)	.382** (.130)				
Team Average Grade Percentage					.322 (.390)	.281 (.390)	.427 (.347)	.298 (.389)				
Intercept	4.203*** (.388)	4.236*** (.340)	3.169*** (.345)	4.464*** (.408)	3.873*** (.411)	3.907*** (.425)	3.375*** (.367)	4.128*** (.433)	5.132*** (.055)	5.260*** (.100)	2.253*** (.049)	5.375*** (.106)
N	779	778	782	778	799	778	782	778	779	778	782	778
Fixed effects wave	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Unstandardized regression coefficients are reported, with standard errors in parentheses.

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001

Hypothesis 5 posits that the effect of status disagreement on team performance depends on the average power distance in team members' home countries. More specifically, we predicted that the negative effect of status disagreement on team performance would be most evident in teams whose members come from high power distance cultures. Table 10 presents the results of the regressions testing this interaction. Model 7a shows the effect of the interaction of status disagreement and average power distance on team performance, controlling for team size and team average status ratings. As predicted, the interaction term is significant ( $b = -.059$ ,  $t(743) = -2.13$ ,  $p = .034$ ). Figure 16 depicts this interaction graphically, including significance levels resulting from the simple slopes analysis. It shows that the effect of status disagreement on team performance is significant in teams with high ( $p = .001$ ) and average ( $p = .002$ ) levels of power distance, but the effect is no longer significant in low power distance teams ( $p = .520$ ). Model 7b in Table 10 shows that the results remain significant when controlling for home country Blau index ( $b = -.061$ ,  $t(742) = -2.19$ ,  $p = .029$ ), and Model 7c that the effect becomes marginally significant when no controls are included in the model ( $b = -.055$ ,  $t(746) = -1.96$ ,  $p = .050$ ). Overall, these results provide support for Hypothesis 5 and suggest that status disagreement is indeed most consequential when team members come from high power distance cultures.

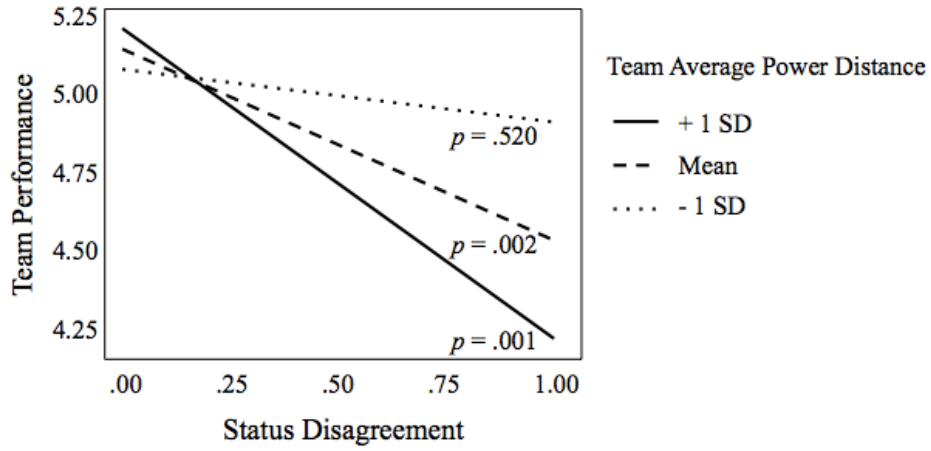


Figure 16: Interaction effect of status disagreement and team average power distance on team performance, including significance results from simple slopes analysis

Table 10: Results from linear mixed-effects models predicting team performance

	Models		
	7a	7b	7c
Status Disagreement	2.856 (1.598)	2.958 (1.600)	2.467 (1.602)
Team Average Power Distance	.008 (.008)	.010 (.008)	.008 (.008)
Team Average Power Distance X Status Disagreement	-.059* (.028)	-.061* (.028)	-.055* (.028)
Team Power Distance St. Dev.	-.010 (.009)	-.012 (.009)	
Team Average Status Ratings	.296*** (.079)	.293*** (.079)	
Team Size	-.039 (.041)	-.070 (.050)	
Team Blau Index (Home Country)		.648 (.577)	
Intercept	3.721*** (.582)	3.460*** (.627)	4.694*** (.455)
N	750	750	750
Fixed effects wave	Yes	Yes	Yes

Unstandardized regression coefficients are reported, with standard errors in parentheses.

† p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001

## **Discussion**

Taken together, the results offer general support for our model of status disagreement in multicultural teams. As predicted, we find that greater diversity along the individualism-collectivism spectrum in team members' national cultures leads to greater status disagreement. At the same time, this status disagreement is reduced if team members have spent time living abroad. Our results also provide evidence that status disagreement significantly interferes with team processes, creating coordination problems that ultimately harm team performance. Lastly, we find that the effect of status disagreement on team performance is also influenced by the team's cultural composition; specifically, status disagreements are most harmful for team performance when the team members come from high power distance cultures.

### **Contributions**

This paper makes a number of theoretical and managerial contributions. First and foremost, we identify status disagreement as a critical yet previously overlooked feature of multicultural teams. While status disagreement is not exclusive to multicultural teams (Bendersky & Hays, 2017; Kilduff et al., 2016), we find that cultural diversity influences both the emergence and impact of status disagreement in teams. Unlike cross-cultural conflict (Stahl et al., 2010; Tsui, Nifadkar, & Amy Yi, 2016), language barriers (Neeley, 2013), or other salient barriers to effective collaboration, status disagreement poses a more "silent" threat – that is, it is entirely possible for teams to suffer the negative consequences of status disagreement without being aware of the cause. This makes it all the more important to better understand when and how it can affect team dynamics and outcomes. By shedding light on this aspect of multicultural teams that was missing in extant theories, we advance current understanding of key processes within culturally diverse teams and identify an important factor that shapes their effectiveness.

The focus on multicultural teams is also an important and timely contribution to the status literature, which has predominantly focused on monocultural teams thus far (Bendersky & Pai, 2018). Multicultural teams represent a theoretically significant domain for status research not only because such teams are becoming increasingly prevalent and crucial for organizational success, but also because the diversity of assumptions, values, and beliefs that exist in multicultural teams have critical implications for existing theories of status. Our findings regarding the prevalence and importance of status disagreements in multicultural teams suggests that existing theories of status may not apply to multicultural settings. This suggests we need to exercise caution in predicting team processes and outcomes or prescribing recommendations to multicultural teams based on research conducted in monocultural contexts.

In addition, this paper is the first to identify a set of key factors that influence the level of status disagreement in a team. Although recent studies have theorized about the effect of status disagreement on team outcomes (Bendersky & Hays, 2017; Kilduff et al., 2016), little is known about the factors that increase or reduce status disagreement, namely in multicultural teams. Our findings provide organizations with some practical considerations for team composition. For example, it would behoove organizations to be mindful of status disagreements in teams that vary widely in the levels of individualism-collectivism of the countries represented, particularly if they also fare highly on the power distance scale. This could mean avoiding putting together teams with high levels of diversity on the individualism-collectivism dimension, or trying to alleviate the negative effects of status disagreement by openly discussing which characteristics and behaviors are to be considered most valuable in that context. Our findings also speak to the value of having team members with cross-cultural experience. Although scholars have documented the value of cross-cultural experience for individual-level outcomes such as

creativity (Maddux & Galinsky, 2009), much less work has focused on the relationship between individual-level cross-cultural experience and team-level outcomes. In presenting the relationship between individual team members' international experience and status disagreement at the team level, we contribute to the nascent stream of research on the value of individuals with extensive cross-cultural experience for diverse organizations and teams (e.g.: Haas, 2006; Jang, 2017).

Next, this paper also provides evidence in support of recent challenges to the prevalent assumption of status consensus that exists in most traditional research on social hierarchies. Importantly, we show that not only do status disagreements exist, but they also significantly impact team outcomes. This reinforces and extends the theories of status disagreement put forth by previous research (Bendersky & Hays, 2017; Kilduff et al., 2016). Bendersky and Hays (2017) conceptualized status disagreement as a moderator of the effect of status conflict on team performance. In their studies, the levels of status disagreement were relatively low (mean disagreement levels between  $1-r_{WG} = 0.08$  and  $1-r_{WG} = 0.11$ ), and the direct effect of status disagreement on team performance was not tested. Meanwhile, Kilduff and colleagues (2016) focused on status disagreements at the dyadic level—specifically, that which occurs when two team members each believe they rank above the other in the team's hierarchy. Although the authors refer to and measure status disagreement at the team level, they did not find evidence that status disagreement affected group functioning or performance. The current study builds on and extends this work by examining status disagreement in the context of multicultural teams. First, by providing further evidence that status disagreements do emerge in teams, we substantiate the claim these earlier papers made that the assumption of status consensus should be relaxed. We also go beyond previous work by examining status disagreement in an

increasingly important context: multicultural teams. While recent work has documented the phenomenon of status disagreement, a limitation of this work is that it was only examined in culturally homogenous settings, as Kilduff and colleagues (2016) acknowledge. Indeed, the low levels of diversity may be part of the reason that previous attempts to test the effects of status disagreement on performance failed to find any significant results. Against this backdrop, the current study also makes an important contribution to the nascent stream of work on status disagreement by providing empirical evidence that status disagreements can indeed affect team processes and outcomes in meaningful ways.

Finally, this paper enriches our understanding of the functional role of status. By providing evidence that status disagreement harms performance, it points to status agreement as a necessary condition for the status hierarchy to serve its performance-enhancing function (Magee & Galinsky, 2008). Additionally, by showing that status disagreement impacts team performance by creating coordination problems, it provides support for a central claim of the functional theory of hierarchy: that coordination is one of the key ways by which hierarchies create the conditions for team success (Halevy et al., 2011). Also, in finding that the relationship between status disagreement and performance is moderated by the team's acceptance of power distance, this paper points to the importance of taking the cultural context into consideration when predicting how a team's hierarchy will affect team outcomes. Lastly, these results also contribute to the ongoing debate about whether status hierarchies are functional (Anderson & Brown, 2010; Bunderson, van der Vegt, Cantimur, & Rink, 2016; L. Greer & Bendersky, 2013; L. Greer et al., 2018) by bringing attention to important conditions under which the benefits of hierarchy are less likely to materialize.

## **Limitations and Future Directions**

It is important to acknowledge that this work has a number of limitations, which point to opportunities for future research. First, in asserting that multicultural teams experience status disagreement, we are implicitly comparing them with monocultural teams. However, as all but one of the teams in our original sample were culturally diverse (Blau index:  $M = .73$ ;  $SD = .07$ ), we could not directly test whether multicultural teams do indeed experience greater status disagreement compared with their monocultural counterparts. Future studies could examine the relationship between team national diversity and status disagreement. A particularly interesting direction would be to examine if the relationship between national diversity and status disagreement is largely linear, or if there is a tipping point at which diversity impacts status disagreement.

Another limitation of the current work is that we infer individuals' cultural orientation based on their home country. While this is a useful starting point for examining the effects of culture on status disagreement, it is important to note that there is within-culture variance, and that individuals from the same culture may vary in their level of individualism-collectivism or power distance (Gelfand et al., 2011; Leung & Cohen, 2011). Thus, future work could capture these variables at the individual level (e.g.: Torelli et al., 2014) to attain more direct measures of one's cultural orientation.

A further opportunity for future research would be to examine status disagreement within organizational contexts, namely multinational organizations with culturally diverse employees. The strength of the organizational culture, for example, may moderate the effect of team diversity on status disagreement, such that in organizations with a strong corporate culture, teams that are nationally diverse experience lower levels of status disagreement than in contexts

without a strong organizational culture. This line of inquiry would shed light on important boundary conditions for the theory presented in this paper.

Finally, while this study focuses on the emergence of status disagreement in the context of multinational teams, there are many other contexts in which status disagreement could emerge. For example, members of cross-functional teams are likely to have differing beliefs regarding status, as their respective backgrounds and training would lead them to appreciate and value different sets of skills and behaviors. Another example lies in collaborations that bring together workers trained in distinct forms of organizing, such as traditional organizations with formal hierarchies and start-up ventures with much more fluid, flat, and informal forms of organizing. There is ample opportunity for future research to explore whether and how status disagreement emerges in these and other types of contexts, contributing to a systematic understanding of the general conditions for status disagreement.

## **Conclusion**

This paper illuminates the antecedents and consequences of status disagreement in multicultural teams. We highlight status disagreement as a critical challenge of multicultural teams that hinders coordination across members, diminishing team performance. In doing so, we build on and contribute to the literatures on status hierarchy and cultural diversity in teams. Taken together, the propositions and results presented in this paper bring to the forefront an important yet previously overlooked phenomenon in multicultural teams, providing a foundation for further inquiry into status disagreements in diverse contexts.

## CONCLUSION

Overall, this dissertation makes several important contributions to the literatures on social hierarchies, team functioning, and multi-cultural diversity in groups. Firstly, in a context where people not only belong to and work across a greater number of groups, but where the groups themselves are increasingly diverse and distinct from each other, this work demonstrates the importance of taking into consideration the aggregate experience of status across the various groups they belong to. The status variance paper provides evidence that indeed individuals often experience varying levels of status across the different groups they belong to, and the status spillover paper in turn demonstrates that rotating across those varying levels of status significantly impacts not only how individuals see themselves, but also their behavior and others' assessments. These findings are particularly relevant in light of the fact that most of the status research to date has treated status hierarchies – both conceptually and empirically – in isolation of each other, and thus invite for a more integrative approach that takes into consideration the status context.

Secondly, the present work also challenges and brings nuance to several assumptions that underlie much of the existing literature on status hierarchies. One is the implicit assumption of status consensus (e.g.: Anderson & Brown, 2010; Anderson et al., 2006; Berger et al., 1972; Kenny, Horner, Kashy, & Chu, 1992; Magee & Galinsky, 2008) – the status disagreement paper demonstrates that, at least in multicultural teams, team members do not necessarily afford consistent degrees of status to the same individuals. This work thus invites us to reconsider existing findings that rest on the assumption of status consensus, in particular if the underlying mechanisms rely on the functional role the status hierarchy is expected to play in facilitating

coordination to improve performance. Another implicit assumption that is called into question by the present dissertation is that individuals are highly accurate in their assessment of their own status (Anderson, Ames, & Gosling, 2008). Both the status spillover and the status disagreement papers offer at least some boundary conditions to that underlying assumption – the first suggesting that, to the extent that team members may be primed to think about other groups where they enjoy different levels of status, their current perception of their own status may be biased; and the second that individuals may assess their own status differently from what other team members with different status beliefs actually afford them.

Thirdly, the work contained in this dissertation also offers some interesting considerations for the team diversity literature. The status disagreement paper sheds light on a critical and previously unidentified challenge that culturally diverse teams in particular may face, and begins to offer some insight into how it may be mitigated. The status variance paper also suggests there may be potential benefits for group functioning from having team members who they themselves experience high degrees of variance in status across different groups, as they may be better at perspective-taking. Minorities may be an interesting group to consider in this context, as they are likely to experience varying degrees of status across settings that vary in their demographic composition.

Lastly, the diversity of methods applied across the three papers in this dissertation – including surveys, longitudinal student projects, experimental studies online and in the lab, and the usage of innovative tools such as the Sociometric badges – is representative of the opportunities scholars looking to study social hierarchies and team functioning can explore. If we want to go beyond the static and isolated perspective that most of the existing research on social hierarchies has adopted to date, and expand the scope to consider the broader status context, it

will be particularly important to step out of traditional controlled lab studies that purposefully strip out differences and contextual factors.

The work conducted for this dissertation also opens up several opportunities for new and interesting ideas I am excited to pursue going forward. As I worked across all three papers, a dimension that consistently sparked my curiosity was the question of time. How much does time proximity affect the potential for the status in one group to spill over and affect other groups? Do spillovers occur more frequently and strongly between co-existent groups, or can the contrast with the status we enjoyed in long gone groups continue influencing our expectations and experiences of status much later in time? In the status variance paper, we specifically restricted the scope of our studies to variance in status across groups participants currently belong to – but an equally intriguing set of hypotheses could be laid out regarding one’s experience of status in groups over time. Lastly, the temporal evolution of status disagreements in a team is a fundamentally important question if we are to fully understand how they affect team dynamics throughout the lifetime of a group and the factors that may mitigate their consequences for the team. What conditions would lead to an increase or decrease in the degree of status disagreement as team members spend more time working together? Additionally, to the extent that there may be convergence in status perceptions, what do the patterns of convergence look like – is there a trend towards majority, or a dominant culture or set of norms? Group processes and dynamics naturally change over the lifetime of groups (Wageman, Fisher, & Hackman, 2009), and so the status hierarchy and individuals’ experience of their own status are likely to evolve and change too in interesting ways.

Another dimension I would like to explore that is potentially relevant to all three papers is gender. For example, I am intrigued by whether and how both status spillovers and status

variance may be experienced differently by men and women. Gender is likely to moderate some of the mechanisms underlying the anchoring and overshooting effects of status spillovers. Also, to the extent that women may experience greater variance in their status throughout their personal and professional lives, this may have important implications for female leaders' identity and behavior.

Lastly, as I consider what I have learned from these three papers in the context of extant research, I believe the current state of the field is ripe for more theory work on social hierarchies. To give an example, the specific form of disagreements we hypothesized about in the status disagreements paper is just one of various potential types of disagreement. Team members may have different perceptions of how steep or flat the hierarchy is, for example, or how mutable or stable it is – and each of these dimensions has the potential to affect the group's processes and outcomes in different ways. Establishing a typology of status disagreements in teams, mapping out their various forms and potential antecedents and consequences, is just one example of the type of theory development I look forward to exploring in the near future.

Overall, this dissertation embodies my passion for understanding how teams and individuals experience and shape their role in the world. Through my research, I hope to contribute to advancing our theoretical understanding of how social hierarchies affect both individuals and teams, and to provide practical insight for leaders grappling with the challenges of organizing and collaborating most effectively in the ever-evolving business environment.

## APPENDIX

### Appendix A: Chapter 1 Study 1; Time 1 Manipulation (Low status example)

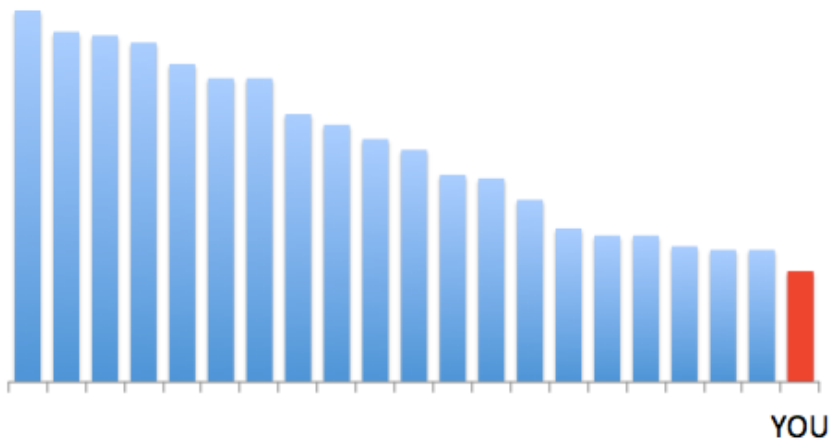
Imagine you are a salesperson for a company that sells medical equipment. Your clients are doctors in the region – you visit them regularly and their purchasing decisions depend greatly on the quality of service you provide.

Every year, the various product lines are assigned to a different group of salespeople. Over the past 12 months you have been selling the product line called MediQM.

Your company has a process of ranking its salespeople according to the status they command in the eyes of their colleagues, bosses, and clients. Half of each salesperson's bonus depends on this ranking. The company has already asked colleagues, bosses and clients to provide their impressions of each salesperson's prominence, respect and influence over the past 12 months.

Below is a graph plotting each salesperson's status level based on the feedback for the MediQM product line. Your bar is the RED one, which means you were considered the MediQM salesperson with the LOWEST STATUS over the past 12 months.

#### Ranking



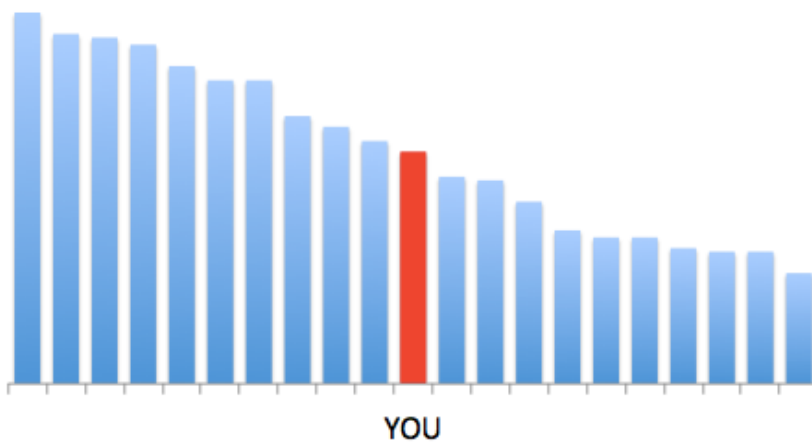
## Appendix B: Chapter 1 Study 1; Time 2 Manipulation (Average status example)

It is now a year later, and over the past 12 months you have been selling the product line called DocQD (you are no longer selling MediQM). The group of salespeople, bosses and clients is not the same from that of the product line you were selling last year, but there is some overlap.

Your company has already asked colleagues, bosses and clients to provide their impressions of each salesperson's prominence, respect and influence over the past 12 months.

Below is a graph plotting each salesperson's status level based on the feedback for the DocQD product line. Your bar is the RED one, which means you were considered a DocQD salesperson with AVERAGE STATUS over the past 12 months.

### Ranking



## Appendix C: Chapter 1 Study 4; Photograph of a Sociometric Badge



Appendix D: Chapter 2 Study 1A; Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)

Using the scale below, indicate your agreement with each of the following five statements.

1 = Strongly Disagree; 7 = Strongly Agree

- In most ways, my life is close to my ideal
- The conditions of my life are excellent
- I am satisfied with my life
- So far I have gotten the important things I want in life
- If I could live my life over, I would change almost nothing

Appendix E: Chapter 2 Study 1A; Shortened Generalized Self-Esteem Scale (Rosenberg, 1989; Tambs & Røysamb, 2014)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1 = Strongly Disagree; 7 = Strongly Agree

- On the whole, I am satisfied with myself
- At times I think I am no good at all (R)
- I feel that I have a number of good qualities
- I feel I do not have much to be proud of (R)
- All in all, I am inclined to feel that I am a failure (R)
- I take a positive attitude towards myself

(R): reverse-coded

Appendix F: Chapter 2 Study 1A; Adapted MacArthur 10-rung Subjective Social Status Ladder  
(Cantril, 1965; Singh-Manoux, Adler, & Marmot, 2003)

Think of the picture below as a ladder representing where people stand in the important groups to which they belong.

Taking into consideration all the different groups you belong to, please indicate what rung you see yourself on relative to your peers in terms of your status, respect, and influence across all groups:



Appendix G: Chapter 2 Study 1A; Perspective-Taking Empathetic Concern Scale (Davis, 1983)

Please read each of the following statements and rate how well each of them describes you:

1 = Does not describe me at all; 7 = Describes me very well

- Before criticizing somebody, I try to imagine how I would feel if I were in their place (PT)
- If I'm sure I'm right about something, I don't waste much time listening to other people's arguments (PT)
- I sometimes try to understand my friends better by imagining how things look from their perspective (PT)
- I believe that there are two sides to every question and try to look at them both (PT)
- I sometimes find it difficult to see things from the "other guy's" point of view (PT)
- I try to look at everybody's side of a disagreement before I make a decision (PT)
- When I'm upset at someone, I usually try to "put myself in his shoes" for a while (PT)
- When I see people being taken advantage of, I feel kind of protective towards them (EC)
- When I see people being treated unfairly, I sometimes don't feel very much pity for them (EC)
- I often have tender, concerned feelings for people less fortunate than me (EC)
- I would describe myself as a pretty soft-hearted person (EC)
- Sometimes I don't feel very sorry for other people when they are having problems (EC)
- Other people's misfortunes do not usually disturb me a great deal (EC)
- I am often quite touched by things that I see happen (EC)

(PT): Perspective-taking sub-scale

(EC): Empathetic concern sub-scale

Appendix H: Chapter 2 Study 3B; Perspective-taking stimuli (Tversky & Hard, 2009)



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