

ABSTRACT

Title of dissertation: EFFECTS SPARKED BY SHINING STARS:
CONSEQUENCES EARNED AND POSED BY HIGH
PERFORMERS AT WORK

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Organizations tend to follow two common practices. First, they seek out and recruit the best and the brightest, with the assumption that these high performers create value and drive success within the organization. Second, they increasingly rely upon workgroups and teams to accomplish organizational goals. Though each practice alone has merit, their interaction seems problematic. Organizational leaders invest substantial resources to recruit standouts, yet also want high performers to seamlessly embed within, and contribute to, workgroups and teams. I am intrigued to consider several puzzles that seem to exist where these trends intersect. How are high performers received by peers their workgroup? How do high performers influence the motivation of their teammates? What impact will high performers have on team collaboration and coordination? This dissertation seeks to address these and related questions. In three essays, I develop a

theory of consequences of outperformance, focusing on implications for the high performer, his or her peers, and the team as a whole.

In Essay 1, I offer a theoretical and empirical account of how high performers are socially treated by their peers. I identify prosocial (i.e., other-oriented) characteristics of the high performer and of the social environment that can mitigate unfavorable social behaviors from peers. In Essay 2, I examine how the presence of a high performer affects the proactive motivation and performance of lower-performing teammates. I also explore individual characteristics that make teammate motivation more or less susceptible to the presence of a high performer. In Essay 3, I explore how the composition of members' past performance impacts team processes. I argue that steeper differences in performance histories galvanize social order, which can facilitate coordination among members yet reduce dynamic collaboration—both of which are critical to team innovation. Using a multi-method approach, I examine these hypotheses using field studies, individual experiments, and team simulations.

EFFECTS SPARKED BY SHINING STARS: CONSEQUENCES EARNED AND
POSED BY HIGH PERFORMERS AT WORK

by

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DEDICATION

For Dad

Dóchas seilbh suas an ceann, agus an croí.

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CHAPTER 1: INTRODUCTION

The Meeting of Two Trends: Talent Wars and the Rise of Relational Work

At the onset of the dot-com boom, Steven Hankins, senior partner in one of the world's premier consulting firm, coined phrase the "war for talent" to describe the dogged recruitment and retention of high performers. While the intensity with which "the war" wages has ebbed and flowed with the economic landscape (Schwartz, Barry, & Liakopoulos, 2013), most recruitment efforts still focus on *stars*, *high performers*, or *best athletes* (i.e., individuals whose past performance exceeds their peers; Becker & Huselid, 2006; Groysberg, Lee, & Nanda, 2008; Sackett & Lievens, 2008). For organizational leaders, acquisition of high performers remains at the top of the strategic agenda and is often equated to subsequent success (Guthridge, Komm, & Lawson, 2008; Lepak & Snell, 2002; Michaels, Handfield-Jones, & Axelrod, 2001). For example, research of outperformers (i.e., those at the top of the performance distribution) in science fields found them exponentially more valuable to their firms compared to lower performers (Ernst, Leptein, & Vitt, 2000). The pursuit of stars stays especially prevalent in organizations whose environment is dynamic or regularly requires innovation, and who focus on continuous improvement of service to clients so as to remain the provider-of-choice; these organizations span professional services firms, sports teams, engineering firms, R&D teams, hospitals systems, and academic departments (Deloitte Human Capital, 2008; Groysberg, Polzer, & Elfenbein, 2011).

In tandem, organizations increasingly utilize of groups and team to accomplish organizational goals (Guzzo & Dickson, 1996; Mathieu, Maynard, Rapp & Gilson, 2008),

especially when competitive advantage necessitates innovation from its workforce (Anderson, De Dreu & Nijstad, 2004; Ford, 1996; Hülshager, Anderson, & Salgado, 2009). The rise in research on teamwork has advanced understanding of team states and processes that promote team effectiveness (i.e., Kozlowski, Gully, Nason, & Smith, 1999; Marks, Mathieu, & Zaccaro, 2001). Yet, most models have been insensitive to the social ordering that naturally results from members' performance differences, which results in disparity (i.e., composition of differences on socially-valued attributes or resources; Harrison & Klein, 2007).

This seems a critical omission given that (1) employee performance histories serve as potent signals of status (Berger, Fiske, Norman, & Zelditch, 1977), and that (2) social hierarchies quickly emerge in the absence of formal hierarchies (Ridgeway & Walker, 1995; Tiedens, Unzueta, & Young, 2007), which is increasingly often the case in workgroups and team environments (Langfred, 2004; Lawler, Mohrman, & Ledford, 1995). Status reflects level of respect and prominence individuals receive from others (Anderson, Kraus, Galinsky, & Keltner, 2012; Keltner, Gruenfeld, & Anderson, 2003; Magee & Galinsky, 2008). It is fundamentally a “positional or relational element of a social structure” (Washington & Zajac, 2005: 282). I argue that the level, pattern, and salience of performance differences exert strong and meaningful forces on the social hierarchy in workgroups and team. Performance differences operate as disparity, which invites a host of social dynamics important to the functioning of a group and the experiences of its members. For example, research offers account for how disparity can spark competition, comparison, and resentment between colleagues (Hambrick & Mason, 1984; Homans, 1961).

Despite the headhunters chase stars and the increased need to embed employees within supportive workgroups and collaborative teams, we lack understanding of how high performers—and the performance disparity their presence creates—influence motivation and social interactions among peers. Sharper understanding of how high performers affect colleagues and their teams therefore seems an important complement to current theoretical insights as well as efforts to inform practice.

Dissertation Statement of Purpose and Summary of Studies

In this dissertation, I seek to develop and test a multilevel theory of consequences of outperformers. In three essays, I investigate how high performers—and the performance disparities they create—impact their social treatment, peer motivation and proactivity, and team processes and, ultimately the facets of innovation. From a practical standpoint, it seems valuable to examine whether recruitment goals and staffing decision may invite hidden consequences. The impetus driving this body of research is not to dissuade the pursuit of talented employees or team members, but rather generate awareness of these consequences and identify potential solutions that can mitigate them. To the extent that business leaders are aware of unintended consequences of performance disparity, they are better informed to make decisions. From a theoretical standpoint, this collection of studies offers several opportunities to consider how theories of motivation and status can be integrated into the developing discussion of dynamics within workgroups and teams.

Essay 1 considers how high performance can trigger social consequences for the performer. Drawing from principals of social exchange and conservation of resources

theories, I developed with my collaborators, Hui Liao, Aichia Chuang, Jing Zhou, and Yuntao Dong, a theoretical model that consider how peers treat fellow colleagues based upon performance, and investigate mechanisms driving peers social behaviors toward high performers. Exploring boundary conditions, my co-authors and I examine prosocial (i.e., other-oriented) characteristics—both of performers and of the social context—that moderate these effects. We adopted a multi-method approach. First, we conducted a scenario-based experiment pilot study to initially examine our theoretical contention: that higher performers create a motivational tension for their colleagues—they are simultaneously beneficial and threatening. Building on this evidence, we test our theoretical model used a multi-method approach, using first a multilevel, multisource, and time-lagged field study in a chain of 80 Taiwanese salons comprised of 300 stylists (Study A). Then, we replicated and extend our findings using a team lab study in a controlled context (Study B). Results from both studies indicated that peers considered higher performers both more beneficial and threatening to work resources, which in turn influenced the extent to which performers were socially supported or were socially undermined. High performers who were also high in prosocial motives buffered themselves from being undermined, while cooperative contexts did not serve as a sufficient condition to balance out favorable treatment of higher performers. Findings offer a picture of why high performers often find it “lonely at the top” and offers a potential avenue for how they may improve upon the social treatment they experience from peers at work.

Essay 2 shifts the focus of consequences to those faced by the peers in a high performer’s team. I integrate theories of proactivity and trait-activation to build a model

that consider how the presence of a high performer can affect peer proactive motivation and proactive performance. I also explore how the presence of a high performer serves as an important moderating context that affects whether peers' proactive disposition will materialize proactive performance. To test this model, I executed a multi-study approach. First, I conducted a team lab in which some teams had a high performer and some teams did not to examine how this presence affected peers' contributions (Study C). Second, I conducted a study that simulated a team context, which offered increased internal validity, enabled measurement of motivational mechanisms driving proactive contributions, and facilitated more objective measure of proactive performance (Study D). Results from these studies converged to reveal that having a high performer in the team can create a strong situation that significantly impacts whether peers' natural traits are expressed and translate into performance.

Essay 3 broadens the focus on the impact of a high performer to the collective work team. Here, I examined the effects of the performance disparity among members that the addition of high performers naturally increases. Integrating literature on status hierarchies with theories of team creativity and innovation, I build a model that considers how performance disparity among members in design teams can prove both helpful and limiting to teams' innovative goals—through different team process mechanisms. To explain this phenomenon, I introduce the concept of social concern in teams, differentiate it from related concepts, and detail how it can dampen creativity while fueling efficiency. To test my hypotheses, I rely upon an experimental study of teams working on an open-ended design task (Study E). Teams in this context needed both dynamic, divergent

participation to maximize team creativity (i.e., generation and sharing of new and useful ideas) and efficient, convergent participation to turn creative ideas into tangible products.

Through my three essays, I endeavor to explain how the introduction of high performers to workgroups or teams can invite paradoxical social consequences for the performer, motivational consequences for peers, and contrasting process consequences for teams. Taken together, I propose to offer theoretical and empirical accounts that can inform business and human resources leaders alike of additional benefits but also hidden costs that may be incurred with the introduction of high performers. I also offer consideration of boundary conditions that may help to offset social, motivational, and collaborative costs.

The rest of this proposal unfolds as follows. In each subsequent chapter, I will frame the central question(s) addressed, articulate intended theoretical contributions, and review relevant theory from which I develop my hypotheses. Then, I describe in detail the research design of each investigation and review the analytical approach and results. Lastly, I offer a discussion of key implications of findings, theoretical contributions, and practical value of each essay. Appendices, Tables, and Figures follow in support of these essays, including an organized view of the key concepts and related definitions by essay (Table 16).

**CHAPTER 2: ESSAY 1 – HOT SHOTS AND COOL RECEPTION: SOCIAL
CONSEQUENCES OF HIGH PERFORMANCE AT WORK**

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Under journal revision

SECTION 2.1: INTRODUCTION & CONCEPTUAL DEVELOPMENT

Business leaders spend significant time strategizing how to motivate exceptional performance (Latham & Pinder, 2005) and how to attract, hire, and retain individuals expected to perform at exceptional levels—the proverbial “best and the brightest” (Schmitt, Cortina, Ingerick, & Wiechmann, 2003). Identifying, motivating, and retaining high performers (i.e., individuals who contribute a high level of performance relative to the work unit’s average) in turn, dominates discussion within management research (Sackett & Lievens, 2008), and prompts talent wars among organizations (Deloitte Human Capital, 2008; Michaels, Handfield-Jones, & Axelrod, 1997; Sutton, 2007). Within the literature, focus on determinants of performance eclipses understanding of consequences (Burke, 1982). Understandably, most studies culminate with performance as the ultimate outcome, which implicitly assumes higher individual performance carries nearly universal benefits.

For several reasons, we argue shedding new light on this assumption is warranted. First, management perspectives are heavily anchored toward the benefit of the collective.

While the contributions of higher performers bring advantage and utility to their employing organizations, supervisors, and work units (Bass, 1990), we rarely consider how high performance affects individual performers. Second, consideration of performance consequences for individuals remains largely limited to an economic view. High performers earn greater financial benefits and opportunities for advancement; however, evidence suggests the effect of performance on social resources and interactions is not straightforward. For example, research found high performance buffered employees from abusive supervision (Tepper, Moss, & Duffy, 2011), but also revealed high cognitive ability employees are more often targeted with aggressive behaviors (Kim & Glomb, 2010). Third, individual performance rarely occurs in isolation, yet most inquiries fail to meaningfully consider the broader social context in which individual performance is embedded. Increasingly, work occurs in groups, involving dynamic collaboration and requiring frequent interaction with others (Grant & Parker, 2009; Griffin, Neal, & Parker, 2007). Within such contexts, knowledge of individual performance quality transmits quickly among members (Molleman, Nauta, & Buunk, 2007). Accordingly, we expect that performance relative to the group shapes how peers view and behave toward individual performers.

The goal of our investigation is to advance and test a theoretical model of social consequences of high performance. To enrich understanding of this phenomenon, we invoke conservation of resources theory (Hobfoll, 1989; 2001). This perspective makes clear that employees are motivated to build and conserve their access to resources. We suggest and offer evidence that peers view high performing colleagues as both beneficial and threatening to their own social and materials resources. These perceptions then shape

the extent to which they offer social support or undermine high performers. We further examine whether prosocial characteristics of the performers and the social context tip the balance toward less destructive, more favorable consequences.

In developing our theoretical model, we seek to contribute to existing literature in several ways. First, we point toward the folly of focusing on the value outperformers often generate at the expense of ignoring the social consequences they can provoke. Higher performers are unlikely to simply yield positive consequences. However, social downside of performing well has been largely ignored—with several noteworthy exceptions. These include Dalton's (1948) early work from the unionized factory floor where highly productive individuals were pressured to ease up, Kim and Glomb's (2010) study of the higher rates of victimization for high cognitive ability workers in health care homes, and Lam and colleagues' (2011) research on interpersonal harming that can result when peers expected disparity between an individual's performance and their own. Collectively, these studies indicate that high performers may attract negative responses from peers. Still, we lack understanding of both the mechanisms driving these behaviors and whether higher performer might also draw more positive social behaviors from peers. Consequently, our study extends consideration to both peer prosocial behaviors (i.e., social support) and peer antisocial behaviors (i.e., social undermining) in an attempt to paint a balanced portrait of social responses to high performers. Related, there is little in the form of theoretical explanations as to why higher performers are socially supported or undermined. We identify relevant mechanisms and, by doing so, highlight an important paradox created by high performers: peers view them as both beneficial and threatening to their own social and material resources. Second, we join scholars in their pursuit to

unearth antecedents and boundary conditions for the impact of destructive behaviors at work (e.g., Duffy, Scott, Shaw, Tepper, & Aquino, 2012; Duffy, Shaw, Scott, & Tepper, 2006). We extend understanding of precipitators of antisocial behaviors, capture psychological mechanisms of the perpetrators, and consider the buffering potential of individual- and group-level boundary conditions. Third, we investigate how prosocial characteristics and environments may shield high performers against detrimental social responses. Through this investigation, we add to the growing body of research that has underscored the value of being other-oriented (Grant, 2013a; Rioux & Penner, 2001) and respond to the calls to examine how nature of the social context of work groups affects colleague behaviors (e.g., Duffy, Ganster, Shaw, Johnson, & Pagon, M. 2006; Glomb & Liao, 2003; Robinson & O’Leary-Kelly, 1998). Finally, we seek to complement and counterbalance studies that have begun to examine how peers respond to poor performers and why (e.g., LePine & Van Dyne, 2001; Jackson & LePine, 2003; Ferguson, Ormiston, & Moon, 2010).

In the following sections, we apply conservation of resources theory as the conceptual basis for our model, to which we integrate literature on social appraisal and exchange. Figure 1 summarizes our model. We then present initial empirical findings from an experimental pilot study and then a large two-wave, multilevel, multisource field study.

Insert Figure 1 about here

SOCIAL CONSEQUENCES OF HIGH PERFORMANCE

While conceptualizations of performance vary (Rotundo & Sackett, 2002; Ilgen &

Hollenbeck, 1991; Welbourne, Johnson, & Erez, 1998), most agree that individual performance reflects the degree of proficiency and quality in employees' accomplishment of tasks specific to their role and contextually-relevant contributions (Campbell, McCloy, Oppler, & Sager, 1993; Griffin et al., 2007). Increasingly, individuals perform within the context of a workgroup. Workgroups describe a collection of individual members who are viewed—both by others and the members themselves—as a social entity and perform work that affects one another (Guzzo & Dickson, 1996). Limiting characterization of the quality of individual performance to an absolute, rather than a relative, phenomenon thus seems insufficient—especially given proxies for status are most meaningful when considering the local hierarchy (cf. Ridgeway & Walker, 1995). Accounting for relative performance differences is integral to understanding how composition of differences across workgroup members significantly influences perceptions, social interactions, and behaviors (Harrison & Klein, 2007). Accordingly, we expect the way peers view and treat performers hinges not upon absolute criteria, but rather how their performance compares to the performance norm (i.e., average level of performance) across the group. As individual performers deviate from average collective performance norms, they are more likely to draw attention, trigger sensemaking, and evoke a behavioral response from peers (Weick, 1995).

SECTION 2.2: THE PARADOX OF HIGH PERFORMERS: BEING A BENEFIT YET POSING A THREAT

Employees actively assess their work environment to identify advantages and challenges that affect their own resources access (Hobfoll, 1989; 2001). The conservation

perspective broadly conceptualizes resources as individuals' overall capability to fulfill their needs. We focus our scope to material and social resources—those observable to peers. When working to conserve resources, individuals recognizes—and disproportionately weighs—cues that are most relevant to the context (Maner, Miller, Moss, Leo, & Plant, 2012). For example, physical characteristics feature more prominently in contexts that require endurance or strength, whereas cognitive ability should carry more salience in the context of an intellectual task. Attributes that are highly relevant to the context become central to impression formation (Flynn, Chatman, & Spataro, 2001). As individual performance is critical within the work context, it serves as a salient cue by which peers evaluate and differentiate colleagues at work (Allport, 1954).

We expect higher performing colleagues to prompt complex appraisal process for peers. On one hand, a high performing member often draws more resources to the group. On the other hand, a higher performing member often garners a disproportionate amount of resources within the group. A high performer can essentially increase the size of the group's pool of resources and also earn a larger portion of the pool. This is consistent with work indicated that—rather than lying on a continuum from negative to positive—many relationships both helpful and harmful (e.g., Uchino, Holt-Lenstad, Smith, & Bloor, 2004). Drawing from a resource perspective, we expect that peers are more likely to evaluate higher performers as more beneficial and threatening to their own access to resources. This perspective maps to the two delineated mechanisms through which the conservation process unfolds (Hobfoll, 2002).

First, conservation of resources theory contends that individuals actively scan to accrue, develop, and maintain resources (i.e., accumulation mechanism). Peers are likely

to see higher performers as beneficial to their resources access through this mechanism. Higher performers often elevate the workgroup reputation, attract more customers, offer greater expertise, and increase leader satisfaction with the group. The prestige they draw to the workgroup can also serve peers' own self-interest and self-esteem (Hogg & Abrams, 1988). Higher individual performance carries assumption of greater relevant expertise, skills, and competencies (Berger, Fiske, Norman, & Zelditch, 1977), and increases likelihood of being viewed as a source of advice (Sparrowe, Liden, Wayne, & Kraimer, 2001). Possessing valued capabilities increases high performers' potential helpfulness, and therefore their instrumental value to other workgroup members (Van der Vegt, Bunderson, & Oosterhof, 2006). They are also more valuable sources of learning and other developmental functions for peers (Kram, 1988).

Consider a law firm associate who offers valuable expertise or contributes beyond expectations during preparation of a new brief preparation or a hair stylist who has been trained in advanced techniques. Working with such a colleague can prove beneficial to those around her. Because higher performing members often enhance workgroup reputation. Her presence increases availability of expertise and improved learning opportunities for those around her. Her group's leader is also more likely to be satisfied with the group.

Second, individuals are motivated to actively recognize and protect themselves against threats to their resources (i.e., protection mechanisms). Peers are likely to see higher performers as threatening to their resources access through this mechanism. As performance often serves as a chief determinant of resource allocation, higher performers have the potential to acquire substantial resources, prompting peers to see them as a

threat to many social and material resources, which are typically finite or difficult to increase.

Higher performers often earn higher status, receive better tasks or opportunities, and attract extra leader attention. Peers have plenty of reasons to be concerned since high performers earn for themselves greater status (Anderson, John, Keltner, & Kring, 2001) and are also likely to trigger unwelcome comparisons to their own performance (Lockwood, 2002). Supervisors may be more inclined to offer higher performers prime workspace, new technology, or better clients. Higher performers also commonly benefit from greater favor and closer relationships with their leaders (Wayne & Ferris, 1990; Bauer & Green, 1996). Peers worry high performers will increase leaders' expectations (Dalton, 1948; Roethlisberger & Dickson, 1939).

Imagine how associates within a law firm may view a high performing colleague who is attracting more attention from partners, or how hair stylists may evaluate a colleague who the salon manager frequently recognizes as a great example of effective customer service. For example, consultants known for their strong performance often earn themselves "first call" to be assigned to new projects that arise. Similarly, it is easy to see why managers often schedule new customer appointments with more talented hair stylists to capitalize on first impressions and to build the salon's base of customers. By earning special preference or extra resources, high performers create costs for peers and deplete the overall resource pool for the workgroup (Rousseau, Ho, & Greenberg, 2006).

Taken together, we expect peers will view higher performers as both beneficial and threatening to their social and material resource access.

Hypothesis 1. An individual's performance positively relates to peers' (i.e., coworkers')

perceptions that the performer is a benefit to social and material resources.

Hypothesis 2. An individual's performance positively relates to peers' (i.e., coworkers')

perceptions that the performer is a threat to social and material resources.

SECTION 2.3 SOCIAL RESPONSES TO HIGH PERFORMERS

Peers' perceptions of a colleague shape their social behaviors toward him or her over the course of a working relationship. Consistent with a resource perspective, stronger judgments of an individual beget stronger social behavioral responses (Hobfoll, 2001). Principles of self-interest dictate that, after cost-benefit comparison of opportunities to social effort required, people cultivate relationships with individuals they consider more beneficial or valuable to their own resources access (Blau, 1964). Employees seek to maximize the quality of relationships with those that bring them the most value (Gibbons, 2004). We expect that when peers perceive that a colleague augments or, conversely, puts at risk their own resource access, they are motivated to react—both cultivating connections with performers seen as potential benefactors and protecting against performers viewed as potentially detrimental to their resources (Hobfoll, 2001). The accumulation mechanism underpinning resources conservation theory suggests that peer perceptions of high performers as beneficial to their resources will motivate them to reciprocate. We expect them to intentionally reciprocate benefit to their higher performing colleague (i.e., prosocial behaviors; Brief & Motowidlo, 1986). In parallel, the protection mechanism of resource conservation theory suggests that peer perceptions of high performers as threatening to their resources will prompt them to protect their own resources through intentional attempts to harm the colleague (i.e.,

antisocial behaviors; Robinson & O’Leary-Kelly, 1998). At a given moment, peers may elect prosocial or antisocial behavioral responses; however, these sets of behaviors are not polar opposites, but rather independent and distinct (Dalal, 2005). Over the course of time at work, we expect that higher performers attract both types of responses.

First, when peers perceive individuals as valuable, they are motivated to prove themselves likewise and to engage in interactions to cultivate a social relationship (Blau, 1964). While most commonly viewed through a lens of altruism, research suggests that prosocial behavior can also be motivated by self-interest and instrumental personal gain (Grant & Mayer, 2009; De Dreu, Nijstad, & van Knippenberg, 2008). When peers perceive that a colleague can benefit them, we expect that they are more motivated to enact prosocial behaviors as a way to prompt reciprocated beneficence. Second, peers are likely more motivated to enact prosocial behavior so as to reconcile any perceived obligation (Gouldner, 1960). Therefore, we expect peers will be motivated to maintain access to high performers and engage in more relationship-building, prosocial behaviors.

In our investigation of peers’ prosocial behaviors to high performers, we focus on social support because it represents a key form of prosocial behavior and is integral to the quality of social relationships (Leavy, 1983). Social support refers to intentional behaviors extended for “fostering positive interpersonal relationships” (Duffy, Ganster, & Pagon, 2002: 333). Social support signals that the target is cared for, esteemed, valued, and “belongs to a network of communication and mutual obligation” (Cobb, 1976: 300). It is considered a near universally beneficial resource (Hobfoll & London, 1986). Empirical review of social support literature attests to its value in buffering employees against the stresses that accompany workplace demands (Visweseyaran, Sanchez, &

Fisher, 1999), promoting individual well-being (Johnson & Hall, 1988), job performance (Beehr, Jex, Stacy, & Murray, 2000), satisfaction, commitment, and decreasing individual intentions to quit (Chiaburu & Harrison, 2008). A hotshot consultant or highly creative stylist earns for himself a reputation with peers of being a beneficial source of, for example, expertise or creative ideas, peers strengthen their connection and opportunities to exchange with him by expressing interest, extending their own help, or offering in return their own skills or ideas. We expect peers to extend more social support toward individuals viewed as advantageous to work resources in order to reinforce strong relationships to allow resources flow and relieve themselves from felt obligation.

Hypothesis 3. Peer perceptions that a performer is beneficial to work resources positively relate to the support that the performer experiences from peers.

In tandem, when peers sense a colleague poses potential risk to work resources, we expect them to reciprocate with antisocial behaviors. Peers are naturally motivated to defend against perceived threats—even if it means engaging in dysfunctional behaviors or taking actions that are out of character (Hobfoll, 1989). Antisocial behaviors are both highly destructive and incredibly costly to organizations (Griffin, O’Leary-Kelly, & Collins, 1998). Being the focus of such behaviors harms individual performance, as well as physical and psychological well-being (Lim, Cortina, & Magley, 2008). Antisocial behaviors are natural responses used to retaliate against threat (O’Leary-Kelly, Duffy, & Griffin, 2000; Skarlicki & Folger, 1997) and may be viewed as a form of reciprocity toward performers for posing threat in the first place. In studying social exchanges, research has most often anchored to the assumption that one individual offers a benefit

and the recipient feels obliged to respond in kind (Gergen, 1969). While less studied compared with virtuous social exchanges, tenets of social exchange also apply to responding negatively in kind toward individuals thought to deplete resources (Gouldner, 1960).

Antisocial reactions can effectively minimize a high performer's social influence (i.e., strength of threat) by contributing to social exclusion and preventing them from further embedding within the social fabric of the group. Such behaviors often intend to marginalize accomplishments and to call into question the expertise from which performers derived influence. Empirical work from a variety of research streams supports these arguments. For example, Aquino & Douglas (2003) found employees who experienced threats to their sense of identity targeted the source of those threats with antisocial behavior. In their study of dyads, Lam and colleagues found that unfavorable performance comparisons increased interpersonal harming behaviors, arguing comparisons damage the perpetrators' view of self (Lam, Van der Vegt, Walter, & Huang, 2011). Early management research also demonstrated that peers are more likely to lash out against a colleague who they view as threatening (Dalton, 1948; Roethlisberger & Dickson, 1939).

We expect peers enact antisocial behaviors specifically designed to socially undermine higher performers. Social undermining describes intentional efforts to impede others' ability to establish and sustain effective interpersonal relationships, to achieve work success, and to maintain a strong reputation (Duffy et al., 2002). In professional contexts, peers could not openly and directly lash out against a star lawyer, strong consultant, or talented hair stylist without the risk of casting themselves in an unfavorable

light. Social undermining as a manifestation of antisocial behavior offers an avenue to weaken the influence of the outperformers in ways that are more calculated and discreet (Duffy et al., 2006). Though more gradual, research offers broad evidence of the debilitating effects of social undermining on targets' well-being, work attitudes, and work behaviors (Duffy et al., 2002; Duffy et al., 2012). Social undermining may be used to restore social balance (Tai, Narayanan, & McAllister, 2011), express frustration (Bies, Tripp, & Framer, 1997), reduce the target's influence (LePine & Van Dyne, 2001), and thwart the target's future success (Duffy et al., 2012). We propose that peers are motivated to socially undermine those perceived to threaten to their resource access as a form of defense fueled by self-protection, a form of reciprocity for perceived injurious effects of the target, and a mechanism to indirectly erode the social and expertise-based influence of target.

Hypothesis 4. Peer perceptions that a performer is threat to work resources positively relate to the undermining that the performer experiences from peers.

SECTION 2.4: MODERATING FACTORS

Moderating Characteristics: Performing with Benevolent Intentions

Next, we considered whether certain individual characteristics enhance the extent higher performers are considered beneficial and buffer them from being considered threatening. Owing to principles of social appraisal and attribution, coworkers endeavor to generate explanations for stimuli that deviate from norms and expectations (Pyszczynski & Greenberg, 1981; Wong & Weiner, 1981). When forming attributions about a colleague, peers seek information about that colleague's abilities and motives

(Eastman, 1994; Allen & Rush, 1998). While this view assumes that peers are discerning of individual motives, evidence has shown peers to be fairly accurate in judging the motives of others (e.g., Grant, Parker, & Collins, 2009; Maierhofer, Griffin, & Sheehan, 2000). The social context of work groups affords peers opportunities to observe one another's verbal statements and behavioral patterns to assess motives (Grant et al., 2009).

We expect that when high performers are also higher on prosocial motives (i.e., guided by the pursuit of benefiting, protecting, and promoting the welfare of others; Grant, 2008; Rioux & Penner, 2001; Schwartz & Bardi, 2001), peers view performers as more beneficial and less threatening. When peers size up higher performers who operate with more other-oriented intentions, they are more likely to assume that performers' efforts are motivated for the group's gain, rather than self-interest. In contrast, we expect that a less other-oriented performers grant peers greater opportunity to evaluate performance efforts as self-serving. Indirect evidence accords with this perspective. For example, employee contributions that extend beyond formal responsibilities were appraised more favorably when contributors were seen as other-oriented rather than self-seeking (Eastman, 1994). Further, proactive contributions of employees were more favorably related to supervisor appraisal when employees were higher in prosocial motives (Grant et al., 2009). Kim and Glomb (2010) also offered evidence that individuals with higher preferences for communion reduced their risk of victimization.

Hypothesis 5. Performer prosocial motives strengthen the positive relationship between his/her performance and being perceived beneficial to work resources.

Hypothesis 6. Performer prosocial motives weaken the positive relationship between his/her performance and being perceived threatening to work resources.

Cooperative Workgroup Climate Moderating Behavioral Response

As employee behavior is a function of both individual perceptions and the environment (Lewin, 1951; Hackman, 1992), we now turn toward consideration of contexts that facilitate or dampen proposed paths to social support and social undermining. We focus on workgroup climate, because it offers a descriptive view of the environment and reflects group members' shared perceptions of their immediate context in terms of practices, policies, procedures, routines, and rewards (Ostroff, Kinicki, & Muhammad, 2013; Schneider, Ehrhart, & Macey, 2011). Climate scholars emphasize it should be characterized with regard to specific criteria (Ostroff et al., 2013). Accordingly, as our focus anchors on prosocial or antisocial behaviors directed toward high performers, we investigate a type of climate that signals shared expectations about how members should socially interact: cooperative climate.

Cooperative climate reflects the extent to which members share perceptions that collective objectives and mutual interests should be pursued (Chatman & Flynn, 2001). Cooperative climates place greater relative importance on common interests, value interpersonal harmony, and promote higher employee satisfaction and team effectiveness (Chatman & Flynn, 2001). Such norms govern social exchange processes and serve as guideposts that constrain certain behaviors and facilitate others (Cropanzano & Mitchell, 2005). We expect higher cooperative climates to reinforce peers' motivation to support individuals who can benefit them and amplify the expression of such motivation in the form of social support. Cooperative climates place greater value on the cultivation of supportive relationships and maintenance of harmony, which we expect to fuel peers' motivation to socially support those who can benefit them. Research offers support for

this perspective, showing cooperative norms strengthened the relationship between individual motivation and enactment of prosocial behaviors (e.g., knowledge sharing; Quigley, Tesluk, Locke, & Bartol, 2007). Therefore, we propose:

Hypothesis 7. Workgroup cooperative climate strengthens the positive relationship between peers' perception that a performer is beneficial to resources and the support offered to him or her.

In addition, we propose that higher cooperative climates constrain the effect that peer perceptions of threat from manifesting as social undermining toward performers. Higher cooperative climates foster social resources among members (e.g., quality and quantity of relationships at work; Dutton & Heaphy, 2003) as well as other resources, such as shared knowledge and trust. When individuals see resources as more plentiful, they protect them less vigilantly (Hobfoll, 1989). Second, harming others at work inherently violates cooperative norms. Lashing out at high performers in cooperative climates likely poses greater risk to peers' social standing or credibility within the group. Cooperative workgroup climates prescribe beneficence toward others and thus encourage greater self-sanction of antisocial behavior.

Hypothesis 8. Workgroup cooperative climate attenuates the positive relationship between peers' perception that a performer is threatening to resources and the social undermining enacted toward him or her.

SECTION 2.5: PILOT: SCENARIO STUDY

Overview of Research

To empirically examine our theoretical model, we conducted a pilot and two

studies (referred to as Study A and Study B in this dissertation). Our explanations for why higher performers spark differential social consequences of hinge upon how peers perceive performers affect their access to social and material resources. We considered it important to initially examine these proposed psychological mechanisms in a controlled setting to isolate perceptions from bias (cf. Kerlinger & Lee, 2000). The objectives of the Pilot study, a scenario-based study, were focused and three-fold: (a) to affirm causal order of Hypotheses 1 and 2—that performance shapes perceptions of how individuals impact to resources rather than vice-versa, (b) to isolate the effects of performance on peers’ perceptions from the influence of any relevant but omitted third variable (e.g., other characteristics of the performer that can affect both performance and peers’ perceptions of resource benefit/threat), and (c) to offer initial evidence that peers’ view higher performers as both more beneficial and more threatening to social and material work resources (i.e., perceptions are orthogonal). Next, we tested our full theoretical model in Study A—a multi-source, multi-level, time-lagged field study in a large chain of salons. This setting facilitated testing of moderating characteristics of the individual performers and the social context, which require time to socially transmit and influence peer opinions and behaviors (cf. Kozlowski & Klein, 2000). Then, we assessed our model in controlled setting, which enabled us to gather convergent results from another task and country context, and to establish causal order.

Sample, Design, and Procedures

The initial Pilot study was comprised of 85 respondents who were recruited through an online community of research participants. This network is similar in structure and function to Amazon’s Mechanical Turk (cf. Buhrmester, Kwand, & Gosling, 2011);

however, it restricts membership to individuals who are students or alumni at accredited U.S. universities. We sent a message to members, inviting them to participate in a study on workplace dynamics in exchange for a small monetary incentive (\$1.50). We described the study as a case study of coworker dynamics. We instructed participants to read a scenario (see Appendix A) that requested them to assume the role of an account manager within a consulting firm. The scenario described their workgroup and their individual responsibilities: overseeing of high-level project coordination, development and maintenance client relationships, and attracting new clients. We experimentally varied colleague performance within-subjects by profiling two colleagues (i.e., performers): one high performer and one low performer. The performance of each colleague was described qualitatively—with one being markedly high performing while the other performing less successfully. We presented quantitative results from colleagues' annual performance appraisal, which displayed one colleague as visibly above average and the other as clearly below average on objective metrics. Then, we administered a questionnaire to assess perceived benefit and perceived threat to material and social work resources and to check effectiveness of manipulation. To increase confidence in data integrity, we eliminated participants who failed to accurately answer an attention filter question¹ and whose survey time fell outside of two standard deviations above or below the mean time. The retained sample included 71 participants (84 percent). Participants were 75 percent male, averaged 10.6 years of work experience and 31.6 years of age.

Measures

Manipulation check. To assess the within-person performance manipulation, we

¹ Embedded within a short paragraph, we asked respondents to answer “none of the above” to a subsequent prompt that asked them the day of the week.

asked the participants to judge the quality of each colleague's performance based on the information describe in the scenario (1 = above average, 2 = average, 3 = below average).

Psychological Mechanisms: Peer Perceptions. We asked participants to report the extent they believed each performer would benefit and threaten their access to material and social resources at work. We relied upon items adapted from Spreitzer (1996) scale measuring access to resources. The three-item scale for perceived benefit included, "improve your access to resources, such as client contacts and ideas," "elevate the reputation of the group," and "benefit your access to important work resources." ($\alpha = .74$). The four-item scale for perceived threat included, "be a source of competition in terms of access to clients", "be a source of competition to supervisor's time and attention," "use more than her fair share of resources such as supplies and workspace," and "threaten your access to important work resources" ($\alpha = .80$). Items relied upon a Likert-type scale anchoring from 1, "disagree strongly," to 5, "agree strongly".

PILOT STUDY: RESULTS AND DISCUSSION

Table 1 displays the summary and descriptive statistics by condition.

Insert Table 1 about here

Manipulation Check. Participants rated performance of the high performer more favorably than the low performer ($M = 1.07$ and 2.68 , respectively). Paired samples t-tests indicated that respondents viewed performance levels as we intended ($t_{(70)} = -18.135$; $p < .001$).

Effects of Peer Perceptions. Participants rated the higher performer as significantly more beneficial and significantly more threatening to social and material work resources compared with the low performer ($t_{(1,70)} = 176.64$; $p < .001$; $t_{(1,70)} = 39.91$;

$p < .001$, respectively).

This pilot study achieved two important gains. First, the controlled nature of the experiment enabled establishment of causality and isolated the relationships between performance and peer perceptions from the influence any potential omitted variables. Second, findings demonstrated that peers can view performers as both beneficial and threatening to their access to resources, which may seem initially counterintuitive. Results offered initial support for Hypotheses 1 and 2—that peers' perceptions of how a colleague impacts their work resources are shaped by his or her performance level, highlighting that high performers can trigger seemingly opposite effects on peer perceptions. Next, we turn to the field to replicate these findings and conduct a full test of our model in Study A.

SECTION 2.6: STUDY A: FIELD STUDY

Sample, Design, and Procedures

Building from this initial pilot evidence, we conducted a time-lagged field study, collecting multilevel, multisource data from 414 hairstylists working for 120 salons in a large Taiwanese chain. This context was particularly apt for our investigation for several reasons. First, this context is highly interactive. Stylists work in the same open space. This makes social exchanges between coworkers both frequent and visible and makes individual performance indicators, such as customer satisfaction and output of service treatment, more tangibly apparent to coworkers. Second, the relative uniformity in the number of stylists per salon (retained data mean = 3.75, s.d. = .92; range = 3-6) lends confidence in the comparability of within-salon social dynamics among coworkers. Third, the dynamic nature of the context requires effective orchestration of individual and

collective tasks among coworkers in order to effectively serve customers. On the one hand, the stylists take care of their customers mostly by themselves during the service encounters, and on the other hand, they frequently work with one another on social, technical, and administrative activities (e.g., client consultations, learning new techniques, etc.). Fourth, examination of this phenomenon carried practical management value for leaders from our partnering organization who were actively seeking to understand potential influencers of employee retention within this industry, which is plagued with high employee turnover (Zeller, McLaughlin, & Frick, 1992). In addition, the strength of each salon's reputation—a product of collective performance—directly impacts each stylist's customer base and financial compensation. In contrast with the common U.S. salon business model, stylists within work groups are more interdependent (e.g., they have co-training events and help backup one another). Further, tipping is uncommon in this setting. Instead, stylists are compensated based on both their individual monthly sales and their salon's overall sales. This hybrid incentive system creates an environment where peers may consider high performers as both beneficial (e.g., contribution to store sales) and threatening (e.g., competition for customers) to resources. Overall, the salons offered numerous advantages to test our proposed theoretical model.

After securing organizational approval, trained research assistants visited the 120 salons to invite managers and employees to confidentially and anonymously participate in a research study. At Time 1, research assistants visited each site and distributed two types of paper and pencil surveys: one to managers to capture employee performance and the other to employees to assess demographics (i.e., age, gender, and tenure), self-reported prosocial motives, and cooperative climate of the workgroup. Research

assistants returned eight weeks later to administer Time 2 measures, which assessed peer perceptions of one another and the extent to which performers experienced social support and social undermining. Token gifts to express our gratitude were given to everyone who volunteered to participate.

Out of the 120 salons, all managers participated, 395 employees participated at Time 1 (95%), and 352 participated at Time 2 (85%). Our phenomenon focuses on social dynamics within workgroups. Therefore, we excluded salons that failed to meet two criteria important to match the research context with our theory. First, we restricted our sample to salons having at least 3 full-time stylists (in addition to the full-time managers) since 3 members reflects the minimum size to theoretically be considered a workgroup (Simmel, 1950; Levine & Moreland, 1990; Menon & Phillips, 2011). Second, we relied upon social network methods of assessment in which each stylist rates all stylists on items capturing our mediating and dependent variables. To reliability capture ratings of peers' perceptions of individual performers (rather than those idiosyncratic to a particular peer), we required multiple peer raters (cf. Wasserman & Faust, 1994). For example, in a salon of four stylist, all three peers had to rate each focal performer on mechanisms. In parallel, each focal performer rated social support and social undermining experienced from each of the three peers to meaningfully capture how he or she was treated across peers. Our final retained sample included 300 employees nested within 80 salons. Stylists were predominately female (93 percent), averaged 28 years old, and 85 percent held at least a bachelor's degree or equivalent.

Measures

All measures were translated into Chinese and then back-translated by two

independent bilingual translators to ensure they retained conceptual meaning (Brislin, 1980). Items relied upon Likert-style scales anchored at 1 (“not at all”) and 5 (“to a very great extent”), unless otherwise specified.

Performance. Managers rated employee performance using a 5-item scale anchored from 1 (needs much improvement) to 5 (excellent). The scale was comprised of Welbourne and colleagues’ (1998) 4-item measure for job role performance (e.g., “quality of work” and “quantity of work”) and added one item to capture context-relevant performance, “creativity of work” ($\alpha = .93$).

We elected to use manager-rated performance for several reasons. First, this design reduced common method bias, which could have inflated the effects between peer-rated individual performance and peer-rated perceptions (Podsakoff, MacKenzie, & Lee, Podsakoff, 2003). Second, it offered more objective, fair assessment since peer evaluations of colleague performance may be influenced by personal relationships, self-serving biases, or their own performance expectations. We assumed that peers had a sense for one another’s performance and supervisor evaluations. To ensure data converged with our assumptions, we also directly assessed individual performance from peers. Results showed peer and manager ratings were significantly correlated ($r = .56$), indicating peers understood who was consider higher performing within their salon. Lastly, we ran analyses using both peer- and manager-rated performance and obtained the same pattern of results across sources.

Prosocial motives. We assessed employee prosocial motives via a 4-item measure by Grant (2008; e.g. “to have a positive impact on others through my work”), asking stylists what motivates them to contribute to the success of the salon beyond direct

service to their customers ($\alpha = .91$). The context makes salient two types of beneficiaries of each stylist's work: customers and peers. Being helpful and other-oriented, during customer service exchanges carries instrumental value for employees (Liao & Searcy, 2012), so even individuals who are low in prosocial motives may still act other-oriented toward customers (Rioux & Penner, 2001). Further, customer-service professionals are trained and expected to maintain a prosocial demeanor during customer transactions, which positively biases their use of prosocial behaviors toward the customer (i.e., results in less controllability; Weiner, 1981). Given this, it was important to isolate individual prosocial motives specifically toward coworkers.

Perceived threat and benefit to work resources. We measured perceived benefit and threat to resources using measures previously piloted. Guided by the application of Spritzer's (1996) access to resource scale into a network assessment format (e.g., Seibert, Kraimer, & Linden, 2001), we asked employees to rate the extent to which they agreed to items regarding each colleague. Two items measured perceived benefit (e.g., "is a beneficial source of resources to me, like customer contacts, ideas and supplies" ($\alpha = .79$) and three items measured perceived threat (e.g., "uses more of his/her fair share of the groups resources, like supplies, space and time with the boss"; $\alpha = .72$). We then created two composite ratings by averaging across the peers' ratings of each focal employee in the group to reflect the extent to which each focal employee is viewed by coworkers as a benefit and threat to social and material resources. We examined aggregation statistics for each of these proposed mediating variables to ensure this treatment was justifiable. For perceived benefit, median $r_{wg} = .83$, $ICC(1) = .19$, and $ICC(2) = .41$, $F_{(299, 585)} = 1.69$, $p < .001$. For perceived threat, median $r_{wg} = .89$, $ICC(1) = .24$, and $ICC(2) = .48$, $F_{(299, 585)} =$

1.93, $p < .001$. These statistics offered support that meaningful variance in peer ratings of threat and benefit is attributable to each individual performer.

Social support and social undermining. We also used a network measure to assess social support, using five items from the scale created by Barrera, Sandler, and Ramsay (1981; e.g., “let you know he/she will be around if you need assistance”; $\alpha = .92$). Each colleague rated the extent to which each coworker intentionally behaved in the way specified by each item. Because of the network approach, reliance on the full 11-item scale would have been too taxing on the respondents. Retained items were those with both stronger factor loadings and highest contextual relevance. We captured social undermining behavior via the same network approach using the 7-item scale from Duffy and colleagues (2006). Employees rated the extent to which each peer undermined them ($\alpha = .93$; e.g., “belittled you or your ideas” and “excluded you from social functions within the group”). We created a composite variable for social support and a composite variable for social undermining by averaging performer’s ratings of the support and undermining received from each peer. The composites reflect the degree of social support or social undermining experienced by the focal individual from peers in the group.

Workgroup cooperative climate. We relied upon the cooperative psychological climate scale used by Chatman and Flynn (2001), and aggregated individual responses (Time 1) to the workgroup level ($\alpha = .81$; “there is a high level of cooperation between stylists”). Inter-rater agreement (i.e., $r_{wg(j)}$; cf. James, Demaree, & Wolf, 1984) averaged .93 across the 80 salons, signaling high within-group agreement (LeBreton & Senter, 2008). ICC(1) was .25, indicating 25 percent of the total variance in cooperative climate is explained by group membership. The reliability of the group means, ICC(2),

was .55, $F_{(79, 220)} = 2.24$, $p < .001$, which supports our expectation that strength of cooperative climate varied meaningfully between salons (Bliese, 2000). Taken together, these statistics offered support for aggregation.

Control variables. To rule out alternative explanations, we conducted all analyses with and without controlling for age, education, tenure, and gender, which can signal status, expertise, or competence (Berger et al., 1977; Bunderson, 2003) and influence likelihood of being the target of aggressive and antisocial behavior (Bowling & Beehr, 2006; Duffy et al., 2012; Duffy et al., 2006; Tepper, 2000). Lastly, we ran all analyses with and without controlling for peers' interpersonal liking of the focal performer given its potential to influence formation of social perceptions (Chua, Ingram, & Morris, 2008), quality of relationships, and social support (South, Bonjean, Markham, & Corder, 1982). We operationalized liking using a network approach, assessing strength of peer-rated friendship tie (i.e., "is someone you consider to be a friend, or might choose to see socially outside of work"; Ibarra, 1995). We averaged across the peers' rating of each focal performer, which aggregation statistics indicate was reasonable (median $r_{wg} = .75$; $ICC(1) = .34$; cf. LeBreton & Senter, 2008). The reliability of the means ($ICC(2)$) for liking of focal performer was .15, which is low but understandable, statistically, given the use of a one-item network measure and the idiosyncrasies that influence interpersonal liking (e.g., Ibarra, 1995). We found no differences with or without these control variables in the models. We report results without individual characteristics and interpersonal liking in the spirit of parsimony.

Levels of Analysis and Analytical Strategy. We specify cooperative climate at the group level, which is consistent with our theory and past literature (cf. Ostroff et al.,

2013). Remaining variables reside at the individual level. Individual performance takes into account collective average. The performer is the focus of both peer perceptions of threat and benefit, as well as the target of social behaviors in responses to these perceptions, and therefore it is most appropriately viewed as an individual level of analysis of a phenomenon nested within a higher-level (workgroup) context (cf. Kozlowski & Klein, 2000). The nesting of individual-level data likely violated the independence assumption underpinning ordinary least squares regression (OLS). Consequently, we tested our hypotheses using random coefficient modeling in HLM (Raudenbush, Bryk, & Congdon, 2004), which enables estimation of both workgroup-level (level 2) and individual-level (level 1) effects on social responses experienced by each performer (Hofmann, Griffin, & Gavin, 2000). Matching our theory, we group-mean centered manager-rated performance to operationalize individual performance relative to the group (cf. Hofmann, & Gavin, 1998). When examining the model with control variables, we also group-mean centered status proxies (i.e. age, education, and tenure) since they are typically most salient when compared to local surroundings (Bendersky & Hays, 2012).

STUDY A: RESULTS AND DISCUSSION

Descriptive statistics appear in Table 2. Bivariate relationships among the variables largely accord with our theoretical expectations but should be cautiously interpreted given they fail to account for the nested nature of the data. When analyzing each dependent variable, we first entered individual relative performance (our distal predictor), adding proposed mediators of outcomes in subsequent models. We assessed the indirect effects of performance on peer social responses, relying the approach

described by MacKinnon, Lockwood, and Williams (2004) and the interactive tool created by Selig and Preacher (2008) to create a confidence interval using R.

Insert Table 2 about here

Test of Direct and Indirect Effects

Table 3 summarizes the analyses. We first assessed whether individual relative performance was significantly related to peers' perceptions. Performance positively predicted coworkers' perceptions of both benefit ($\gamma = .21, p < .001$; Model 1) and threat ($\gamma = .09, p < .01$; Model 2a) to social and material resources, supporting Hypotheses 1 and 2, respectively. Hypothesis 3 proposed that being perceived by peer as beneficial positively predicts the social support performers received; however, analysis suggested the opposite effect—with performers considered more beneficial experiencing significantly less social support ($\gamma = -.27, p < .05$; Model 3a). In support of Hypothesis 4, peer perceptions of the threat positively related to performers' reported experience of social undermining from peers ($\gamma = .39, p < .001$; Model 4a). We examined the indirect effect using the Monte Carlo method outlined by Bauer, Preacher, and Gil (2006). Tests indicated a significant and negative indirect effect for higher performance on peer enacted social support ($-.06$; $CI_{95\%} = [-.10, -.02]$) and a significant positive indirect effect for higher performance on peer enacted social undermining ($.04$; $CI_{95\%} = [.01, .07]$).

Insert Table 3, 4, and 5 about here

Test of Moderating Effects of Performer Prosocial Motives

Next, we examined Hypotheses 5 and 6—whether performers' prosocial motives could amplify the extent to which peers viewed them as a benefit while also buffering

them from being viewed by peers as threatening. Results indicated that performers' prosocial motives did not strengthen the positive relationship between performance and peer perceptions of benefit ($\gamma = -.04$, *n.s.*; Model 1b) but did attenuate the relationship between performance and peer perceptions of threat ($\gamma = -.16$, $p < .05$; Model 2b). Following the procedures of Aiken and West (1991), we examined the simple slopes. Supporting Hypothesis 6, results indicated that higher performance positively predicted peer perceptions of threat when focal performers were low ($\gamma = .20$, $p < .001$), but not high ($\gamma = .03$, *n.s.*), in prosocial motives. Guided by steps outlined by Bauer and colleagues (2006), we multiplied the first and second stage effects and assessed the significance of these indirect effects at high and low levels of performer prosocial motives. We elected this method over Edwards and Lambert's (2007) bootstrapping approach for moderated mediation since the resampling approach of the latter ignored the nested structure of these data. Analyses revealed a significant, positive indirect effect for relative performance on social undermining when prosocial motives were low ($\gamma = .11$, $p < .01$) but no effect when prosocial motives were high ($\gamma = .00$, *n.s.*), suggesting prosocial motives buffered higher performers from injurious social responses. Figure 2 illustrates this interaction and Table 4 summarizes the indirect effect of relative performance across varying levels of the performer's prosocial motives. Analyses further revealed that high prosocial motives not only buffered high performers from being perceived as threatening to social and material resources (stage 1 moderation), but reduced the manifestation of threat perceptions as social undermining toward them (stage 2 moderation), which together underscored the value of being more other-oriented carries for high performers.

Test of Moderating Effects of Workgroup Cooperative Climate

Hypothesis 7 suggested that higher cooperative climates strengthened the relationship between being perceived as a benefit and the social support received. Findings demonstrated an interestingly moderating effect; though, given the negative, rather than expected positive, relationship between perceived benefit to resources by coworkers and social support received from coworkers, this relationship is not straightforward. To further understand this cross-level interaction effect, we plotted the simple slopes (see Figure 2). The pattern of relationships suggested that when peers perceived that others benefited their resource access, they were *less* likely to offer social support when cooperative climates were high ($\gamma = -.68; p < .001$), but not low ($\gamma = -.23, n.s.$). Higher performance had a significant, negative indirect effect on social support when cooperative climate was high ($-.16; CI_{95\%} = -.29, -.07$) but only a trending effect when cooperative climate was low ($-.04; CI_{95\%} = -.12, .01$). Results suggest that the social support expected in more cooperative climates did not extend to a high performer, a finding that we will discuss further in the Discussion. Hypothesis 8 proposed that more cooperative climates would constrain social undermining in response to threat; however, the relationship between perceived threat to resources and social undermining was still strong and positive when cooperative climate was high ($\gamma = .35, p < .01$) and low ($\gamma = .40; p < .001$) and did not significantly differ across levels of the moderator (difference $-.05; CI_{95\%} = -.39, .20$).

In the field, we found that, like our initial pilot test, higher performance predicted stronger perceptions that the performer is both beneficial and threatening to peers' work resources (H1 and H2). Results also illustrated an unfortunate view of the social consequences of high performance, indicating that high performance gives rise to

negative consequences in the form of withheld support and increased undermining. Next, we seek to replicate these findings in a controlled context, address limitations, and further probe into the interesting effect that more cooperative climates have on the treatment of higher performers.

Insert Figure 2 about here

SECTION 2.7: STUDY B: TEAM LAB EXPERIMENT

METHODS

Purpose & Contribution

In order to address limitations to Study A, we conducted an experiment, which expanded our contribution by establishing causal order as well as to constructively replicating Study A results. The context of a controlled experiment also provides us the opportunity to examine the proposed cognitive mechanisms in tandem with the emotional mechanism of felt envy that Kim and Glomb studies have linked to victimization of talented coworkers (2010; 2014). With Study B, we also sought to further unpack the surprisingly effect of a cooperative climate found in Study A by manipulating the incentive structure and description of the team context to influence variance in cooperative climate directly. Lastly, we broadened the domain of peer social responses toward high performers.

Sample

Three hundred and sixty-one undergraduate business majors enrolled in a large, public university on the east coast of United States participated in the study as partial fulfillment of their course research requirement. We told students that the objective was

to study virtual team performance and collaboration, and that they would be working together in teams. In total, there were 102 teams of 3 or 4 members each (mean = 3.54).

We instructed participants that they would be working together to complete rounds of critical thinking and analytical reasoning tasks. The rounds of tasks were a compilation of questions from past LSAT, GMAT, and Mensa tests. We intentionally chose more difficult questions so that members would be uncertain of their own performance within each task. Students were incentivized to care about their teams' performance because the top performing teams earned cash at the end of the semester—\$150 for teams of 3 and \$200 for teams of four². We chose to design the experiment in a virtual team context in order to retain both experimental control (i.e., performance feedback manipulation) and sense of interpersonal interactions in a work context.

Design & Experimental Manipulations

We designed a 2 (peer performance: average versus high) x 2 (cooperative climate: high versus low) between-subjects experiment in the context of newly formed teams.

Manipulation 1: Peer Performance. We varied performance with member and team task scores provided to the team after each round of questions. In all teams, one student was randomly treated as the focal performer. In the control condition, his or her preset performance scores each round were comparable to peers. In the experimental, high performer condition, his or her scores each round were notably higher. The other team members (i.e., peers who were subjects of the manipulation) received the same preset, similar performance scores (see Appendix B).

² While additive team performance results varied across each condition—based upon whether participants were led to believe a high performer was present—teams were rewarded at the end of the semester based on merit: the sum of team members' actual correct scores.

Manipulation 2: Cooperative Climate. A number of studies informed our thinking and guided our approach of inducing high versus low cooperative climate (e.g., Chatman & Barsade, 1995; Chatman et al., 1998; Hill, Bartol, Tesluk, & Langa, 2009; Tjosvold, 1985; Tjosvold et al., 2005; van Knippenberg et al., 2001). These studies advocated for a multi-pronged approach in which cooperative values are (1) explicitly espoused by an authority figure and (2) a contrasting reward structures is implemented that reinforced these espoused values. Consistent with past work, we first provided an overview of the task that emphasized how teams may best work together. One version highlighted **high cooperative interactions** and one version that highlighted *low cooperative interactions*. Sample text from these manipulations display below:

“Virtual teams make communication more difficult, so be sure to devote some time to **collaborative discussion/spirited debate**”... “**Collective collaboration/Healthy competition** within the team is fine—just make sure you complete your responsibilities.”

Second, we varied the nature of incentives offered across conditions. In the competitive condition, members of top performing teams were rewarded based on individual performance relative to the group, with a minimum of \$15 per person and a maximum of \$110 per participant. In the cooperative condition, members of top performing teams evenly split the cash prize, \$50 per person. The evenly split rewards functioned to focus members toward cooperative, team oriented interaction, while the differentiated, individual-based reward structure is likely to motivate individuals to appraise and maximize their own outcomes.

Procedures

For the first 15 minutes of the study, team members met and worked together at a conference table. The experimenter asked them to briefly introduce themselves, provided

an overview of the task and team incentives, and then gave them practice questions to review and discuss so as to better prepare them for the types of questions they would encounter when collaborating virtually. Next, we directed participants to individual workstations (i.e., cubicles with individual computers) and told them that they would be logging in and re-joining their teammates virtually.

To simulate a virtual environment, a Qualtrics survey was coded. Students were instructed on how to “log in” to the site to be “connected to their team members.” Once participants “were connected” to their teammates, they were guided through their task rounds by a “research administrator” from whom they received messages and instructions (i.e., preset text coded to appear like an instant message). At various points in time, the “administrator” in the virtual environment asked the group questions or polled for opinions. Members could see their own responses and those feign to be the messages and responses from their teammates. These interactions were fabricated for the purposes of experiment to help legitimize the rouse that members were virtually connected.

Once in the virtual team environment, team members were each presented with a different, unique task strategy, and told that sharing was likely to help their team’s performance. Strategies included tips and approaches such as how to identify hidden assumptions and how to efficiently eliminate incorrect answers to guess well on hard questions. For the remainder of the study, team members performed four task rounds (3 rounds and 1 bonus round) in their simulated virtual team. At three points in time, team members were permitted to chat for a limited duration via a Google Chat with their real team members: after learning their unique task strategies and after Round 1 and Round 2 of the task.

Measures

Mechanisms: Perception of Resources. After Round 2 feedback, I used the same measures as Study A to assess participants appraisal of how each member of their team affected their social and material resources adapted to the task context. Items capturing perceptions of benefit of threat to resources were tied to a 6-point Likert scale ranging from 1 (not at all) to 5 (to a very great extent).

Dependent Variables: Social Responses to the Focal Performer

Social Support. We operationalized supportive behaviors in two ways. First, we captured the odds of participants to *share information* with a peer. After Round 2, we gave the participant another hint to assist them with the next rounds (i.e., “none of the answers to the questions in Round 3 are (E) none of the above”). We told them that they could share with one other member of their team, asking them whom they would like to share with: either the focal performer (coded as 1) or another peer (coded as 0). Second, we also assessed whether they would *offer an opportunity* to a peer based on performance. After Round 3, participants were told that they qualified for a bonus round and could choose one other qualifying member to join them for this opportunity. They were offered the option of choosing between the focal performer (coded as 1) and one of their other peers (coded as 0). The message noted that points earned during this round would still count toward their individual score.

Response to Social Undermining. The base rate for social undermining within a small window of time is low (Kammeyer-Mueller, Wanberg, Rubenstein, & Song, 2013) and would be difficult to observe naturally in a constructed setting. Therefore, we created a situation that would facilitate variance in social undermining by simulating a chat

between participants. In brief, each non-focal performer (i.e., peers) was told they were paired with one of their other teammates to complete a bonus round (i.e., 4th round). At the beginning of the round, we told each participant that s/he had a couple of minutes to chat virtually with their partner before the round began. At that time, we sent participants a pre-scripted message that appeared to be from the team member that they were partnered with. The initial chat lines first mention the difficulty of the task and offered the participant the chance to respond. Then, the second scripted message from the team member mentioned that s/he thought the “[focal performer’s name] was kind of annoying.” We captured how participants responded to this social undermining of the focal performer to assess whether variances in responses were systematically influenced by condition and perception of benefit and threat. Upon completion of the study, two raters, blind to condition, coded the participants’ responses to this undermining of the focal performer. Using a seven-point scale, responses ranged from actively defending (e.g., “stop it, that’s not nice!”, coded as -3) the performer, to actively undermining the performer (e.g., “hahaha, I feel the same way, he sucks”, coded as 3). Neutral responses (e.g., “what is that?”) were coded 0. We averaged these ratings across coder given that they independently achieve very high levels of agreement, $r_{wg} = .90$, and reliability, $ICC(2) = .93$.

Moderator: Cooperative Climate. We assessed participants’ perceptions of cooperative climate at the end of the study, relying on a 7-point scale and using the same measure as Study A (cf. Fletcher & Nusbaum, 2010; Chatman & Flynn, 2001).

Additional Measures. Students were nearing the end of their coursework in the program and therefore may have had classes with one another. As such, we captured

familiarity with other team members as a potentially relevant control variable: “How well did you know this person prior to today's study?” (1 = not at all; 5 = to a very great extent).

We also measured peers felt *envy*, since it shares conceptual space with perceived threat. The major distinct between the is the envy considered an emotional reaction and assumes a social comparison process that is personal and that the other person has something valuable or is already successful (for review, Duffy, Shaw, & Schaubroeck, 2008) while perceived threat is a more instrumental, cognitive appraisal and implies no judgment of inferiority of self. We surveyed participants after Round 2 on envy using a 4-item measure adapted from Kim and Glomb’s (2014) 1-item network measure (“I envy this person’s task performance. For example, (1) it is so frustrating to see this person succeed so easily; (2) feelings of envy toward this person constantly torment me; (3) I generally feel inferior to this person’s success; or (4) this person’s success makes me resent this person.”). Items were adapted from the scale established by Schaubroeck and Lam (2004). We captured them as four separate items, which were “I envy this person’s task performance,” “I feel inferior to this person’s performance,” “this person's success in the task makes me resent him/her,” and “feelings of envy toward this person tormented me.” ($\alpha = .76$).

Manipulation Validation. To check whether participants were attentive to differences in performance scores across conditions, we asked participants the extent to which they agreed that each team member “...performed better than most team members” using a 6-point scale (1 = disagree strongly; 6 = agree strongly).

RESULTS

Manipulation Checks.

Consistent with our manipulation, at the end of the study participants recalled the focal performing significantly better than others in the experimental condition than the control condition ($M = 5.13$ v. $M = 3.80$; $p < .01$). Similarly, participants reported higher perceptions of cooperative climate in the condition that endorsed cooperative values and offered equal payout to team members, compared with the condition that endorsed more individual values and offered differential payout to team members ($M = 5.07$ v. $M = 4.74$; $p < .05$).

Hypothesis Testing.

Table 6 provides reliabilities and descriptive statistics, including means, standard deviations, and correlations. To assess hypotheses, we used ordinary least squared regression for continuous dependent variables and logistics regression for binary variables to account for their non-normal distribution. Following prescribed procedures (Aiken & West, 1991). We first regressed the dependent variable on performance condition and climate condition. Then, we re-estimated the model adding more proximal predictors, and re-estimated again with the interaction terms.

Insert Table 6, 7a, and 7b about here

Results from ordinary least squares (OLS) regression offered support for Hypothesis 1 and Hypothesis 2. Participants appraised a team member as significantly more beneficial and more threatening if their performance was high versus average ($\beta = .24$, $p < .01$ and $\beta = .23$, $p < .01$, respectively). To assess peers constructive social behavior toward the focal performance as a function of his/her performance and perceived impact on resources (Hypothesis 3), we performed two logistic regressions.

First, we examined participants' decision to share information (with the focal performer v. other peer) based on their perceptions of benefit and threat. Lending support to Hypothesis 3, controlling for condition, perceptions of benefit were positively related to sharing information with the focal performer rather than the other peer ($b = .27$, S.E. = $.15$; $p < .01$). The odds ratio was 1.31, demonstrating that peers who perceived their peer a one unit more beneficial to their access to resources were 1.31 times more likely to choose to share with the focal performer rather than the other peer. Second, we tested to whom participants offered an additional opportunity (focal performer v. other peer) as a function of their perceptions. Similarly, controlling for condition, results showed a positive relationship between peer benefit perceptions and electing to offer the opportunity to the focal performer ($b = .28$, S.E. = $.17$; $p < .01$) with the odds ratio indicating that peers were 1.32 times more likely to invite the focal performer, controlling for performance condition. Lastly, we calculated the indirect effect of performance condition on each of these variables. Using MacKinnon and colleagues MCFAM approach (2004), results indicated significant indirect effects for high performer condition on these two support behaviors: shared information and offered opportunity ($.065$; $CI_{90} = [.004; .141]$, $.076$; $CI_{90} = [.002; .149]$, respectively).

To test whether these effects were moderated by cooperative climate (Hypothesis 7), we enter we estimated these models with the additional step adding the hypothesized moderator, cooperative climate, and the interaction term. Effects were not significant, leaving Hypothesis 7 unsupported: the positive relationship between peers' appraisal of a teammate as a benefit and the support they provide him/her, as either shared information or offered opportunity, was not significantly stronger in more cooperative climates. Table

7b summarizes these logistic regression results.

Hypothesis 4 predicted that perceptions that an individual was a threat to participants' resources would positively related to social undermining. In a lab context, we examined this as participants' response to social undermining. In line with this hypothesis, perceptions of threat to resources positively predicted more destructive treatment for the focal performer ($\beta = .12; p < .05$). Further, we calculated indirect effects using the same approach as Study A (cf. MacKinnon et al., 2004), which showed a positive, significant indirect effect for performance condition on social undermining (.034; $CI_{90} = [.030; .035]$).

Examining Hypothesis 8, moderated regression results were contrary to expectations but in line with the surprising effect of Study A: more cooperative climates *strengthened* the positive relationships between threat perceptions and social undermining ($\beta = .15; p < .05$). Analysis of simple slopes (cf. Aiken & West, 1991) revealed that the relationship between perceptions of resource threat and more negative response to social undermining was significantly positive in both high and low cooperative climates. However, higher cooperative climate significantly strengthen the relationship (high cooperative climate; $b = 1.08, S.E. = .43; p < .01$; low cooperative climate; $b = .66, S.E. = .25; p < .05$). Figure 3 illustrates this interaction. Converging with the field study, this implies that peers are more likely to penalize higher performing members who they view as resource threatening when expectations of cooperation are higher, perhaps because there are viewed as more deviant from the group standard. Table 8 shows the indirect effect of high performance condition on social undermining in high and low cooperative climates.

SECTION 2.8: GENERAL DISCUSSION

We sought to offer a contextualized view of how individual high performance—one of the most valued organizational commodities—can prove paradoxical: facilitating favorable economic consequences but a mix of favorable and unfavorable social consequences for individuals. Findings from our multi-wave, multi-source, multilevel field study highlighted an even more challenging social dynamic for high performers: through its effect on peer perceptions—higher performance was positively and significantly related to social undermining. Results from our experiment also revealed when higher performers were undermined, peers were more likely to continue the vicious cycle of undermining rather than defend performer—holding all else constant.

In the team lab context, higher performers received support in the form of more information and opportunities. However, contrary to expectations, findings suggested that there might not be an upside to balance the social equation for high performers, as higher performance was negatively related to more social, non-task related forms of support in the field. Results may imply that higher performers receive less social support due to less perceived need rather than peers' intentional withholding support.

We also found that high performers are not without recourse. Increasing focus toward benefiting others and espousing prosocial motives significantly buffered higher performers from being viewed as threatening and being socially undermined, while a more cooperative climate was insufficient to shelter higher performers from social undermining. Rather, results interestingly suggested that more highly cooperative contexts further dissuade peers from offering social support to high performers.

Theoretical Contributions

Our theoretical model and findings offer several important contributions to extant research. First, we leverage theoretical principles of conservation of resources—as well as integrate tenets of social appraisal and exchange—to offer a view of how coworkers respond to high performers. In doing so, we shift the focus toward how performance impacts performers socially rather than how it economically advantages them. Our findings caution performers to consider the broader costs in light of the benefits of striving to excel. Specifically, we found that across eighty groups, higher performance sparked more social undermining but in parallel did not necessarily earn higher performers more social support. This finding accords with persistent evidence that individuals asymmetrically balance potential threats over benefits (Taylor, 1991; Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), and that perceived resource loss outweighs resource gain when individuals decide how to act (Hobfoll, 2001; Kahneman & Tversky, 1979).

The results also revealed an intriguing pattern: being viewed as beneficial to peers' access to resources may earn one instrumental, work related support, but it does not earn higher performers the socio-emotional support of peers, as demonstrated in the field. This seemed crucial to understand better, since social support is one of most robust predictors of not only well-being but also long term work-related success metrics (for review, Achor, 2010; Halbesleben, 2006; Viswesvaran et al., 1999). Moreover, this may indicate that peers expect those who carry benefit to the group should be the ones *giving* rather than *receiving* support. Receiving social support from peers may hinge more upon perceived needs of group members, rather than perceived social debts owed to high performers or motivation to cultivate relationships with high performers through support.

Individuals reap financial rewards for higher levels of performance, but the increasingly social nature of work environments necessitates support from others (Seibert et al., 2001). Certainly, strong and consistent performance benefits individual careers. However, as the nature of work grows more complex and increasingly requires supportive networks to accomplish work, high performers must form high quality bonds with their coworkers (Dutton & Heaphy, 2003; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) and develop social capital (Seibert et al., 2001) in order to sustain high achievement and long-term thriving at work. The significant, negative indirect effect of performance on social support in the field may also reflect the lack of opportunities—real or perceived—that peers have to offer support to high performers. This may mean that when high performers need support, they profit when those needs are made known. Rather, in the context of day to day work, where peers have to make trade-offs on where to spend their time, they may gravitate to helping relatively lower performers instead. Future investigation on the rationale and justification for withholding support from higher performing peer would be interesting to shed light on this “lonely at the top” sentiment and complementary to work that has demonstrated that people enjoy seeing top performers fail (Feather, 1994) while they prefer to see underdogs succeed (Vandello, Goldschmied, & Richards, 2007).

Third, we add to the growing body of literature on destructive behaviors. Scholars have directed increased attention toward study of antisocial behaviors (e.g., Glomb & Liao, 2003; Duffy et al., 2012) and specifically encourage greater attention toward understanding determinants and contextual factors that shape antisocial behavior (e.g., Duffy, O’Leary-Kelly, & Ganster, 2003; Duffy et al., 2006; Robinson & Greenberg, 1998). Managers and leaders may invite unexpected issues should they seek out “star”

individuals (Bendersky & Hays, 2012; Groysberg, Polzer, & Elfenbein, 2011). Our findings underscored the importance of considering how performance impacts social dynamics and also unearthed mechanisms that drive antisocial behaviors.

Fourth, our inquiry highlights both the potential and the complexity of prosocial characteristics: more prosocial high performers shielded themselves from exposure to negative social consequences behaviors, while more prosocial (i.e., cooperative) contexts seemed to require more from high performers. High prosocial motives buffered high performers both from being viewed as threatening and from being the target of social undermining. We found in Study A that prosocial motives advantaged higher performers by reducing how threatening they were perceived, however, did not enhance how beneficial they were viewed. The imbalance of this moderating effect is likely due to the fact that negative features of stimuli draw more attention and spark more thorough information processing compared with positive features (Baumeister, et al., 2001). Situations of increased threat heighten the need for sensemaking (Weick, 1995) and fuel information seeking (Gino, Sharek, & Moore, 2011), whereas in situations where loss is not salient, additional explanation is less critical (e.g., Bies & Shapiro, 1988).

Our study also joins research (e.g., Grant et al., 2009) showing that employees who are prosocially motivated not only experienced gains that could benefit others but also carried instrumental benefits for themselves by enhancing how others view their contributions. Interestingly, higher cooperative climates strengthened the negative relationship between being viewed as a benefit and social support received. This may indicate that, in more cooperative workgroups, higher performance is viewed as a stronger deviance or standout contribution that violates group norms. Peers may consider

such deviance, albeit positive deviance, as a risk to the quality of the social space.

Finally, our study offers a balance to recent theoretical and empirical accounts of how peers respond to poorly performing members within their workgroup (e.g., LePine & Van Dyne, 2001; Jackson & LePine, 2003; Ferguson et al., 2010). Peers often account for the majority of daily interactions at work and disproportionately impact work experience (Morgeson & Humphrey, 2006). Acknowledging this, work has addressed how peers attribute poor performance and, in turn, whether they confront, train, compensate for, or avoid low performing colleagues in order to help the workgroup (LePine & Van Dyne, 2001; Jackson & LePine, 2003). Studies by Ferguson, Ormiston, and Moon (2010) indicated that peers were more inhibited to approach colleagues about their performance when they saw them as more powerful. Our findings indicate that high performance also meaningfully shapes peer responses and perceptions that what give rise to such behaviors. Evidence from our initial experiment indicated that high performers may actually find themselves triggering more polarizing peer perceptions compared to lower performing colleagues. Studies have demonstrated that peers derive pleasure when they see high achievers get knocked down (i.e., tall poppies; Feather, 1994; 2012) and elect more harmful behaviors toward smarter individuals and classmates (Kim & Glomb, 2010; Peterson & Ray, 2006). We join this thread of research and extend knowledge of social benefits and risks faced by individuals based on the quality of their performance. Further knitting these theoretical perspectives together to understand how peers treat performers who are negatively deviance v. positively deviate, may prove both interesting and of practical value.

Practical Implications

Findings highlight several challenges for high performers, managers, and human capital leaders. First, our study reveals to high performers that both their work efforts and their motives are likely to shape how peers treat them. Results revealed the unexpected instrumental value of caring—and making clear that you care—about others. We do not suggest that high performers feign prosocial motives simply to earn themselves more favorable social treatment. In fact, this approach may backfire, as peers are quite discerning of disingenuous motives (Eastman, 1994). However, being more open about genuine care and concern felt for others and expressing behaviors that are congruent with prosocial motives may carry an unanticipated benefit for high performers. Namely, it can buffer them from poor social treatment. Conversely, high performers who are naturally more self-oriented may thrive better in more competitive environments (Lazear, 1998). Results also imply that high performance reduces the social support peers offer, unless perhaps supervisors make it clear that high performers are in need of support. Equipped with this understanding, high performers might benefit from more actively seeking social support and better articulating their own challenges and work needs.

Second, managers should be mindful of how performance differences shape social dynamics. Cultivating and protecting positive interactions within workgroups is an important managerial responsibility, and yet leaders are also likely to underestimate the harmful effects that performance differences have on the workgroup (Groysberg, Nanda, & Noria, 2004). Findings caution managers against (1) forming a workgroup without consideration of the performance composition and (2) ignoring how existing performance differences affect the group. For managers who see instances of social undermining within their work group, results highlight a potential root cause worth exploring:

coworkers see one another as a threat to their resources.

Third, we should also caution managers against protecting group harmony at all costs; discouraging high performance or suppressing performance differences will make it difficult for the group to attract and retain highly capable and motivated individuals. In addition, justifying social undermining behavior in the name of protecting a positive group dynamic will only exacerbate a toxic social environment and dampen motivation to enhance performance. As a result, group members may be on good terms with each other, but group performance suffers. Recent reports indicate high performers are the most difficult employees to retain (cf. Martin & Schmidt, 2010), and this phenomenon has often been reasoned to be due to increased opportunities elsewhere (cf. Human Capital Institute Report, 2009). However, we offer a potential alternative explanation for these trends. Since peer relationships are critical to the quality of employees' work experience (Chiaburu & Harrison, 2008), the disheartening social treatment from peers may be eroding high performers' commitment to their workgroups. Therefore, our findings suggest that managers should provide social attention, as opposed to just economic rewards to high performers, as they are often excluded from peer social support and targets of peer social undermining behavior.

Limitations and Future Research

The contributions of this research should be viewed in light of its limitations, which we hope offer several promising avenues of further inquiry. First, we focused on how higher performers are viewed by peers with respect to their own resource access. We focused investigation of on social and material resources broadly, with findings indicating that peers' consideration of benefit and threat to resources were positively and

significantly related. However, these findings point toward what seems an important follow-up question: whether specific types of resources are considered more or less sensitive to the impact of higher performers. Hobfoll (1989; 2001) delineated resources as material, social, or personal. It would be interesting for future research to explore whether higher performers influence peer perceptions of specific resources to varying magnitudes and also whether serving as a perceived benefit or threat to one type of resource is more predictive of social responses than other types. Such an approach may facilitate examination of additional individual differences of both the performer and the peer that may moderate effects revealed by our research. For example, a higher performer may trigger unfavorable comparison that affects the self-confidence of some peers (a personal resource; cf. Hobfoll, 2001) more than it affects, for example, their ability to get the work shifts they prefer (material resources)—an effect that may be amplified for peers who generally hold lower opinions of themselves or are more self-critical (i.e., low core self-evaluation; Judge, Erez, Bono, & Thorenson, 2003).

Second, we focused on how social motives of performers contributed to how they were viewed and treated. We did so in order to stress the value of being viewed as prosocial and to offer a potential remedy within the performers' control. It may be interesting to turn the tables and examine how peers' social motives moderate both their perceptions and their social treatment of higher performers. For example, peers who are more self-interested and status conscious may also be more sensitive to potential threats (Blader & Chen, 2011) and therefore more motivated to protect their own interests by acting against high performers. Conversely, self-interested peers may find higher performers more admirable than prosocial peers would, since prosocial peers may view

high performers' efforts as self-seeking or disruptive to solidarity (i.e., incongruent to their own social motives) and therefore more punitively judge performers. To extend understanding, it would be interesting to consider how matching of performer and peers' social motives affect consequences experienced by the performer.

Third, we examined social consequences of high performance in a context of moderate rewards and task interdependence. We did so in an attempt to reflect the context in which many employees find themselves. It would be fascinating to see how this phenomenon would unfold within more interdependent contexts (i.e., teams) or less interdependent contexts (i.e., sales groups). Greater interdependence may encourage peers to view high performers as more beneficial and less threatening, since individual effectiveness adds value to the collective no matter if team success is simply aggregated efforts of members or complex orchestration of teamwork (Kozlowski et al., 1999). However, team members often work more proximally due to increased interdependence, which could create more opportunities to perceived performance disparity, increasingly salience of the threat and benefit a high performing team member can pose to shared resources. Less interdependence may polarize peers regarding high performers: some may view them as appropriately acting toward their own interests, while others may see them as more directly competing with them. Varying the level of interdependence among peers to address these questions may further enrich understanding of how high performance affects peer perceptions and, in turn, expression of those perceptions as behaviors toward the performer.

Conclusion

An old adage explains “it’s lonely at the top” and a Japanese proverb warns higher performers that “the nail that sticks up gets hammered down.” Our research sheds light on the often-ignored social challenges these expressions imply and broadens understanding of the spectrum of consequences for high performance as well as mechanisms that begin to explain why. Findings emphasize cooperative group contexts may be insufficient to protect high performers from being targets; however, their own motives might serve to shield them. We hope this inquiry stimulates further efforts to understand the impact of performance on social dynamics and inform high performers and managers alike how they might find ways to promote both performance and individual well-being.

**CHAPTER 3: ESSAY 2 – STAR STRUCK: THE EFFECT OF HIGH
PERFORMERS ON PEER PROACTIVE MOTIVATION AND PERFORMANCE
SECTION 3.1. INTRODUCTION & CONCEPTUAL DEVELOPMENT**

Teams offer a number of advantages including increased flexibility and broader capability to cope with complexity, which help to explain why teams have fast become the principal unit of work (Kozlowski & Bell, 2013; Sundstrom, DeMuse, & Futrell 1990). However, the synergy thought to be the hallmark of teams often remains elusive. Instead, teams often experience process loss or loss in productivity (Ilgen & Pulakos, 1999). For teams to fulfill their potential and serve their organizations effectively, members must develop, orchestrate, and combine their inputs to offer contributions that exceed beyond just the sum of the parts (Kozlowski et al., 1999). In the context of teams, it becomes increasingly important for individual members to speak up, make a case for their viewpoints, integrate their responsibilities with others, and make things happen in order to operate effectively (Grant & Ashford, 2008; Griffin, Neale, & Parker, 2007). While supervisors may not always welcome such proactivity (Frese & Fay, 2001), understanding how to motivate proactive contributions from team members and encourage them to take initiative carries important managerial implications for teams.

Parker and colleagues (2010) introduced proactive motivation as a core antecedent of individual proactive contributions. Proactive motivation describes motivational states comprised of members' sense that they *can*, *have reason to*, and *are energized* to generate goals and strive to mobilize and affect change (Parker, Bindl, & Strauss, 2010). Yet, we know little about how team inputs affect the proactive motivation among individual team members. The few studies that have identified specific team-level

inputs to individual proactivity have focused on work design (e.g., Fuller, Marler, & Hester, 2006) and leadership behaviors (e.g., Chen, Farh, Campbell, Wu, & Wu, 2013; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004). Still, we lack valuable understanding of how team composition shapes the proactive motivation of team members. This is surprising, given that (1) composition of member differences can exert powerful influence on the motivation of members (Harrison & Klein, 2007) and (2) team composition and staffing decisions represent one of the more tractable ways leaders can influence teams.

I seek to redress this gap, in part, by extending theoretical and practical understanding of how team composition affects whether individual proactive disposition (i.e., personal initiative) manifests as proactive motivation. Specifically, my goal in this essay is to propose and test a model examining how the presence of a high performer in a team impacts the proactive motivation of teammates. The purpose of this inquiry is to advance research on proactivity with the emphasis of how the composition of team members can serve as an important moderating context. I expect that proactive individuals—or those higher in personal initiative, (i.e., natural inclination toward behaviors that are self-starting, proactive, and persistent in overcoming barriers; Frese & Fay, 2001)—will experience more proactive motivation. Namely, individuals higher in personal initiative will consider themselves more efficacious, feel more responsible for the accomplishment of team goals, and also feel less inhibited to proactively contribute to the team task. These three psychological states map to the core motivational processes that comprise proactive motivation, which drives effort toward proactive contributions (Parker et al., 2010).

However, I propose that the presence of a high performer creates a strong situation that is likely to constrain the expression of peer proactivity. Central components of individual proactivity include anticipating issues and planning ways to contribute. I expect that, in teams, high performers weaken the confidence proactive peers have in their ability to contribute, alleviated the self-imposed pressure they place on themselves to take initiative, and temper their energies to contribute. These arguments find their theoretical root in trait activation theory, which advances the idea that cues within work contexts can strengthen or attenuate the expression of traits as motivation and, subsequently, behaviors (TAT; Tett & Burnett, 2003).

In the sections that follow, I develop arguments related to how the addition of a high performer can reduce proactive motivation of proactive peers and test this model in a team lab experiment and a virtual team simulation (see Figure 3). Through this inquiry, I seek to make several important theoretical contributions to the literature on proactivity and team composition. First, by drawing on recent theoretical developments related to proactive motivation (Parker, Bindl, & Straus, 2010), I direct attention to a how members' proactive contributions can be influenced by differences in team composition—namely, the performance disparity created by the high performer. In doing so, I illustrate the potential value in tighter integration between with teams literature and literature examining the impact of situation-trait combinations (e.g., Tett & Guterman, 2000)—specifically, how such integration can expand our understanding of member motivation and contributions. Second, I highlight how teams research can gain from alternative and more specific consideration of composition and diversity in work groups and teams (cf. Harrison & Klein, 2007). Studies of diversity have enriched the team

literature (e.g., Harrison, Price, Gavin, & Florey, 2002), but there still has been almost no investigation of member differences beyond demographic or personality attributes. My study aims to demonstrate the value of examining patterns of member characteristics and their consequences beyond categories to those that explicitly consider composition of socially valued attributes.

Insert Figure 3 about here

SECTION 3.2. PERSONAL INITIATIVE, HIGH PERFORMERS, AND PROACTIVE MOTIVATION

Personal initiative refers to the persistent, stable proclivity that predisposes individuals toward proactivity, self-starting initiative, and persistence (Frese & Fay, 2001; Kring, Soose, & Zempel, 1996). Proactive individuals are likely to effect change and contribute beyond the status quo within teams (Grant & Ashford, 2008; Griffin et al., 2007). Growing evidence has linked dispositional proactivity to proactive contributions and performance, such as taking charge and voice (e.g., Parker & Collins, 2010; for quantitative review, Fuller & Marler, 2009).

This proactive disposition-performance relationship can be explained through the lens of motivation, a more proximal predictor of behavior and performance (Kanfer & Heggestad, 1997). In their theory of proactive motivation, Parker and colleagues delineated three psychological states that compose proactive motivation, theorizing that proactive motivation is the product of individual self-reflection on three questions: Can I do it? Should I do it? Am I energized to do it? (Parker, Bindl, & Strauss, 2010). Drawing from the framework of proactive motivation, I expect that individuals who are

high on personal initiative are likely to experience greater proactive motivation as composed of greater sense of self-efficacy, increased felt responsibility, and reduced social inhibition. Supporting this view, studies have linked these proactive dispositions to heightened context-specific self-efficacy (Chen et al, 2013; Parker, Williams, & Turner, 2006), suggesting that personal initiative is likely to impact individual appraisal of “*can I*” proactively contribute. Research has demonstrated that more proactive individuals are also more likely to take on greater responsibility (Parker & Ohly, 2008) and feel responsible for change (Fuller, Marler, & Hester, 2006). This suggests that degree of individual personal initiative is likely to influence appraisal of “*should I*” proactively contribute. Personal initiative is considered the opposite to reactive tendencies, and the self-starting nature of individuals high in personal initiative is considered to be influenced more by internal drive to contribute rather than external pressures (Frese & Fay, 2001). Consequently, I expect personal initiative to negatively relate to social inhibition, influencing peer appraisal of whether they “*are energized to*” proactively contribute.

Hypothesis 1. In a team context, peers’ personal initiative (i.e., proactive disposition) will positively relate to their proactive motivation as represented by (a) increased state self-efficacy, (b) increased felt responsibility, and (c) decreased social inhibition.

Personal initiative shares considerable conceptual space with to proactive personality (Grant & Parker, 2009), which refers to the stable individual tendency to cause environmental change (Bateman & Crant, 1993; Crant & Bateman 2000). However, while Crant and Bateman’s conceptualization of proactive personality is unlikely to be influenced by the context (2000), Frese and Fay offer arguments and evidence for why personal initiative as a stable, individual disposition can be constrained

by some work contexts, for instance those that are more complex or those that limit control (2001). Consistent with this view, in their theory of proactive motivation, Parker and colleagues contend that individual disposition will positively relate to proactive motivation, but that contextual variables will interact with this individual difference to affect motivation (2010).

Individuals high in personal initiative need opportunity and motivation to express their proactive tendency as proactive contributions. I expect that having a high performer on the team reduces how affirmatively teammates to respond to the question of “*Can I, should I, and am I energized to contribute?*” I expect that the presence of a high performer to create a social context that weakens the positive link between peers’ dispositional proactivity and their belief in their own ability (i.e., state self-efficacy; Bandura, 1997). With a high performer on the team, proactive peers may be likely to make unfavorable social comparison that can negatively affect their sense of capability (Lam et al., 2011; Mussweiler, Rüter, & Epstude, 2004). I also expect that the presence of a high performer to temper proactive peers’ sense of personal accountability (i.e., felt responsibility; Hackman & Oldham, 1976; 1980). At minimum, proactive peers are likely to see higher performers as members who should share responsibility for taking initiative. Lastly, I expect the presence of a high performer to weaken the negative link between proactive disposition and feelings reservation, hesitation, and social discomfort (i.e., social inhibition; Mattick & Clark, 1998). Even though more proactive peers are thought to be less concerned with speaking up or taking charge (Bateman & Crant, 1993; Morrison & Phelps, 1999), they may be more likely to regulate such tendencies under the

assumption that a high performer offers expertise to which they should defer. I base these premises on trait-activation theory.

Trait-activation theory delineates the ways in which organizational contexts moderate how personality, disposition, and abilities manifest as behavior and performance (Tett & Burnett, 2003). According to Tett and Burnett, weak situations lend themselves to the most variance in trait-expressive behavior, while “strong situations” (cf. Mischel & Shoda, 1995) and contexts are thought to exert “press” on expression of traits (2003). When the work context contains more trait-relevant cues, individual characteristics like dispositions are more likely to be activated and behavior is more likely to manifest in trait-consistent ways. Such cues are considered *facilitators*. In contrast, features of the environment or situation can also attenuate expression of a trait. These contextual cues are considered *constraints*. For instance, an initial legal consultation with a potential client is likely to interact with an attorney’s personality trait of agreeableness because, in this context, it is valuable for the attorney to understand and empathize with the potential client’s situation, to encourage openness, and to build rapport. Conversely, cues in trial court proceedings are likely to constrain the same attorney’s agreeableness from expression, since agreeable behaviors would be counter to goal at hand: successful argument of the client’s case.

Social cues within the environment can serve as powerful trait-relevant cues for members working collectively on tasks (Tett & Burnett, 2003). I expect that a high performer creates a strong situation and introduces features to the contexts that constrain their peers’ personal initiative from manifesting as proactive motivation and proactive behaviors. First, the unfavorable social comparison that the performance disparity

introduces to social context is likely to undermine proactive individuals' sense of self-efficacy. Studies spanning the social comparison literature have empirically linked unfavorable social comparisons to reduced self-efficacy (e.g., Bandura & Jourden, 1991). For example, HIV patients who were exposed to an upward comparison (i.e., someone of better health) reported less self-efficacy in managing their health (Bogart, Gray-Bernhardt, Catz, Hartmann, & Otto-Salaj, 2002). Study of clinical rotations in medical school showed that students estimated their abilities significantly lower if they were in the presence of a high performing peer (Raat, Kuks, van Hell, & Cohen-Schotanus, 2013).

Second, I expect that high performers constrain the natural inclination of proactive individuals to feel responsible for the team success. More proactive individuals tend to scan the environment to anticipate issues to which they can apply their initiative (Grant & Ashford, 2009). In the presence of a high performer, I expect that proactive peers are likely to perceive fewer opportunities to contribute, believing that needs of the team are already being met—or are likely to be met—by the high performer. With less team needs to address, proactive individuals may consider their contributions as comparatively expendable, which is likely to decrease their sense of accountability (Kerr & Brunn, 1983). Moreover, they may perceive that it is better for the team if they defer to the high performer's expertise, believing it is better for him or her to assume the burden of greater responsibility (Fuller, et al. 2006).

Third, perceived capabilities of a high performer can serve as a social cue that dampens proactive energies to contribute. The unfavorable social comparison that high performers can prompt within the team context is likely to reduce proactive peers' energy

to contribute and to draw their focus off-task toward consideration of their performance comparison (Tesser, Millar, & Moore, 1988). Consistent with this view, research indicated that colleagues experience more withdrawal and social inhibition when making upward comparisons (Cohen-Charash, 2009). The presence of a high performer may also prompt proactive peers to intentionally self-censure their expression of proactivity out of concern that their task efforts may invite greater comparison.

Hypothesis 2. In a team context, the presence of a high performer attenuates the positive relationship between peers' personal initiative and proactive performance.

Hypothesis 3. In a team context, the presence of a high performer weakens (a) the positive effect of proactive disposition on state self-efficacy, (b) the positive effect of proactive disposition on felt responsibility, and (c) the negative effect of proactive disposition on social inhibition.

SECTION 3.4. MOTIVATING PROACTIVE PERFORMANCE

With increase in interdependence between colleagues and decrease in role differentiation, scholars have called for wider consideration of what constitutes performance (e.g., Ilgen & Poulakos, 1999; Welbourne et al., 1998). In response to this, Griffin and colleagues (2007) advanced a model that specifies proactive behaviors as an important performance dimension for individuals who work dynamically with colleagues. Thus, this dimension of performance seems especially relevant for individual who work in teams. Individual proactive performance describes member contributions that are self-starting, future-oriented, and aimed to improve upon the status quo (Griffin et al., 2007). Proactive performance can take form generally as identifying opportunities for improvement, voicing issues, and taking action to improve things, or in context-specific

ways such as offering up creative ideas, analyzing problems, outlining steps for how the team can plan and approach work, and advocating (i.e., issue-selling) to members of one's team (Crant, 2000; Fuller, Marler, & Hester, 2006; Grant & Ashford, 2008).

At its core, proactive performance involves contributing to work goals by challenging and improving the current way that things are done. Therefore, dependent on how it manifests, proactive performance has the potential to create interpersonal strain, be viewed as deviant, or be considered threatening (e.g., Liang, Farh, & Farh, 2012; Morrison, Wheeler-Smith, & Kamdar, 2011; Stamper & Van Dyne, 2001; Warren, 2003). Consequently, I expect proactive motivation to serve as a critical antecedent to individual proactive performance in teams. Theoretical frameworks advanced by Parker and colleagues (2010) guide this argument. The antecedents to proactivity delineated by Grant and Ashford (2008) also describe three analogous psychological mechanisms that explain whether individuals will be proactive. Namely, they argue that proactivity occurs when individuals experience greater efficacy, when accountability is induced, and when proactive action can reduce uncertainty.

Following these perspectives, I expect that proactive motivation—as specifically reflected by increased state self-efficacy, increased felt responsibility, and decreased social inhibition—drives peers' proactive contribution to their team. State self-efficacy fuels peers' willingness to contribute and act to advance team's goals (Stajkovic & Luthans, 1998). I expect team members who experience greater efficacy carry the confidence that is sometimes needed to cope with the potential consequences of proactive behaviors. However, even when people feel *able* to offer proactive contributions, they may lack compelling *reason to do so* (Parker et al., 2010). With a stronger sense of

responsibility, I expect team members to be more inclined toward acting proactively since fulfillment responsibilities is likely viewed as a benefit, while falling short of responsibilities likely viewed as a loss. Simultaneously, even if individuals believe themselves capable of proactive contribution, and interested to perform proactively, they have must feel *energized to do so* (Parker et al., 2010). However, when peers feel greater social inhibition, this energy wanes.

Studies from several streams of literature offer direct and indirect support for these arguments. First, studies of voice have indicated that employees' believe their efforts will succeed in accomplishing something, they increase their willingness to enact voice behaviors, a form of proactive performance (for review, Morrison, 2014). In tandem, research on issue-selling suggests that that when employees' sense that they are more capable, they are more likely to be proactive (e.g., Ashford, Rothbard, Piderit, & Dutton, 1998). Second, Morrison and Phelps (1999) offered evidence that individuals who experience a sense of responsibility are more likely to take charge. Graham contended that when individuals feel a strong sense of responsibility, they may perceive it as costly *not* to take initiative (1986). In a field study of utility providers, Fuller, Marler, and Hester (2006) linked felt responsibility for constructive change to employees' behavior and continuous improvement efforts. Third, when people experience increased social consciousness and anxiety that characterized social inhibition, they are inclined to reduce engagement or withhold communication (e.g., Daly & Stafford, 1994).

Hypothesis 4. In a team context, team members' proactive motivation (as comprised of increased self-efficacy, greater felt responsibility, and reduced social inhibition) positively predicts their proactive performance.

Hypothesis 5. In a team context, the presence of high performer will moderates the mediated relationships between proactive disposition and proactive performance via increased self-efficacy, greater felt responsibility, and reduced social inhibition such that the mediated relationships will be weaker with a high performer than without one.

METHODS

Overview of Studies

Scholars have identified several factors that meaningfully influence proactive motivation, such as job design (Grant & Parker, 2009), leadership styles (Chen, Farh, Campbell, Wu, & Wu, 2013), and resource access (Fuller et al., 2006). Therefore, to isolate the focal phenomenon, it seemed most prudent to examine hypotheses within a controlled setting. The experimental context increases confidence in the causal order of the chain and helps rule out alternative explanatory mechanisms. To test the hypothesized relationships, I conducted two experimental studies.

First, Study C takes the form of an interactive team experiment in which members received information about one another's past performance on an individual pre-assessment task and then were asked to work together on an open-ended team design project. The object of Study C was to conduct an initial test of the theoretical contention that the presence of a high performer constrains their proactive peers from manifesting as proactive performance. It carried the advantage of placing participants in an actual team and engaging in teamwork. This increased the psychological realism of the context.

Second, Study D took the form of an individual experiment in which I simulated a virtual team context where participants were led to believe that they were engaging with other participants and working together with these "teammates". The purpose of Study D

was to constructively replicate Study C and to specifically examine the motivational mechanisms that drive the proposed effect. Study D also enabled a highly controlled environment and clean manipulation and eliminated the argument that results of Study C may be influenced by variance in the behavior of other team members (i.e., the high performers).

SECTION 3.4. STUDY C: TEAM EXPERIMENT

METHODS

Purpose and Sample

Participants consisted of undergraduate students enrolled in management courses. For Part 1 of the Study C, participants completed a pre-survey of individual difference measures (i.e., personal initiative and demographics) and a series of assessment-based tasks: the remote associates test (cf. Mednick, 1962), unusual uses task (cf. Guilford, 1967), and a fabricated test of “innovative judgment.” The purpose of this assessment was to enable a credible manipulation of participant performance results when they came to the lab for Part 2. Their actual scores on this battery of tests were not calculated or used. For Part 2, participants arrived to scheduled lab sessions chosen based on their availability. Upon arrival, they learned that this was an open-ended team task. Participants were incentivized to work well as a team because the top performing teams earned \$150 with each of the three members receiving \$50.

Design, Manipulations, and Procedures

The experimental portion of the study was one hour in duration. Upon arrival, the experimenter asked participants to read a sheet that explained the task and objectives (see Appendix B). The task sheet informed participants that they were working in conjunction

with researchers from the School of Engineering to better understand the innovative process in design teams. The experimenter then told each participant that they will be assigned to a team, asked their name, and notified them that she will soon be bringing them their performance feedback from the portion of the task that they completed online.

Participants were randomly assigned to a condition in which one of them was construed to be a high performer or not. Participants were assigned to their position by shuffling nametags in advance of affixing them to performance report envelopes containing manipulated performance information. The experimenter returned with envelopes, one with each participant's name and nametag on it, which contained a score of their performance on the online tasks and assessment as well as the score of their peers. Randomly assigned focal performers received either a 3 of 10 (control condition, no high performer present) or a 9 of 10 (experimental condition, high performer present) on the performance evaluation. The two other participants received a 3 out of 10 and became the focal peers in the experiment. The combination of performance feedback combinations facilitated testing of main effects with the control condition was comprised of three low performing members (i.e., no performance disparity) and experimental condition comprised of two low performing member and one high performer (i.e., performance disparity).

After two minutes with their packets, the experimenter requested that participants finish reading the task sheet and their performance report and join their team members at the conference table at the entrance of the research lab. Participants were reminded that they would be working together to design a model for an "innovative research facility in Greenland". They were asked to exchange names, participant numbers, and performance

results from Part 1. Then, the experimenter reviewed key information of the open-ended team task (see Appendix B), told them that time would be tight, and asked them to begin working.

They had approximately 30 minutes of action phase (cf. Mark et al., 2001) to accomplish the task—10 minutes to collectively come up with a creative concept, 2 minute to give an audio pitch that summarized their design, and 14 minutes to implement their design using a large supply of Legos as well as give a video pitch of their model. At the end of task, members were asked to return to their personal cubicle to complete a survey about their experience within the team, their peers' proactive performance, and measures to checked effectiveness of the manipulation. (Please also see Study F of Essay 3 for more detail regarding the nature of the task).

Measures

All scales rely upon established measures and a Likert response scale anchored to 1 (“Disagree strongly”) and 5 (“Agree strongly”), unless otherwise specified.

Personal Initiative. In the pre-survey, participants reported their dispositional proactivity with Frese and Fay's 7-item scale of personal initiative, which is designed to capture individual disposition toward taking “an active and self-starting approach to work goals and tasks, and persisting in overcoming barriers and setback” (2001: 97). The measure included items such as “I actively attack problems” and “whenever there is a chance to get actively involved, I take it.”

Proactive Performance. I operationalized peer proactive performance in two ways. First, I measured proactive performance with Griffin, Neale, and Parker's (2007) 3-item scale designed to assess individual task proactivity, which I adapted to the context.

For each member, peers were asked to rate the extent to which they agreed he or she “initiated better ways of doing parts of the tasks,” “came up with ideas to improve the way in which the team worked through the task,” and “made improvements to the team’s work.” I averaged across the two peer ratings of each individual since analysis indicated high inter-rater agreement (median $r_{wg} = .90$) and excellent reliability ($ICC(2) = .88$). Second, I captured an alternative form of proactive performance using Van Dyne and LePine’s (1998) 4-item measure of voice behaviors. Items were “spoke up to encourage other members to get involved”, “introduced new ideas or modifications in procedures”, “tried to bring about improved strategies for the team”, and “communicated his/her opinion about issues even if it was different or if others disagreed.” These peer ratings also yielded strong agreement (median $r_{wg} = .89$) and reliability ($ICC(2) = .82$).

Manipulation Check. To assess whether participants were aware of their past performance and perceived the focal performer consistent with the manipulation, I asked participants how they themselves and each of their teammates scored on Part 1 of the task—the online portion (1 = high, 2 = medium, and 3 = low).

Control variables. Lastly, Study C put participants in a more dynamic, social team environment and asked team members to rate proactive performance, making the measure more susceptible to social status-related biases. Therefore, guided by review of the literature, I captured ethnicity and gender. I recorded gender of participants in case it has a bearing on the relationship between personal initiative and proactive behaviors, or if it directly biased appraisals of these behaviors. For example, research indicated that having lower relative status, which performance disparity induces, creates more tension for men than for women, presumably since women are more accustomed to having lower

relative status (Eagly, Beall, & Sternberg, 2004). Also, women are also less inclined toward challenging-oriented behavior (i.e., voice) given that it defies traditional gender roles (Eagly & Crowley, 1986).

RESULTS

Means, standard deviations, and correlations are displayed in Table 9. Thirty-five teams comprised of 120 participants completed the study. I removed four teams from the final sample due to one of their members having advanced knowledge of the team simulation. The retained sample included 108 participants, 36 focal performer who were used to present teams with a high performer (or no) and 72 peers, whose experimental data were used to test effects.

Manipulation Check

I tested effectiveness of the manipulation with analysis of variance (ANOVA) using participants' recollection of the focal performance Part 1 performance results. In the control condition, the focal performer was rated significantly lower ($M = 1.27$) than the focal performer in the experimental condition ($M = 2.68$; $t_{(34)} = 10.56$; $p < .001$). Findings indicated that participants the performance difference for the focal performer consistent with intentions.

Hypothesis Test

I conducted ordinary least squared regression (OLS) to test Hypothesis 2, that individuals' personal initiative would be positively related to their proactive contributions when there was no high performer in their team, however, this relationship would be negative in the presence of a high performer. First, I relied upon the moderated regression steps that Aiken and West (1991) outlined, regressing proactive performance

(operationalized as both proactive performance and voice) on the predictor. Second, I regressed personal initiative, condition (dummy-code condition (0 = control condition, no high performer; 1 = high performance present), and their interaction term on to each operationalization of proactive performance. Table 10 displays these results. It is noteworthy that personal initiative did not significantly predict either voice or proactive performance. Instead, results indicated that the relationship between personal initiative and proactive performance was contingent upon the context, namely, whether a high performer is in the group. To facilitate interpretation of the significant personal initiative by condition interactions on voice and proactive performance, I plotted the simple slopes (see Figure 5). Following the recommendations of Aiken and West (1991), I tested whether these slopes were significantly difference from zero. Interestingly, analysis of simple slopes revealed that, in the presence of a high performer, there was a significant negative relationship between personal initiative ($b = -.62; p < .01$), and proactive performance ($b = -.54; p < .05$). However, when no high performer was present, there was a marginally significant positive relationship between personal initiative and voice ($b = .33; p = .053$), and a positive trend between personal initiative and proactive performance ($b = .28; p = .10$).

In sum, these findings partially supported Hypothesis 2 and provided initial evidence for the broader theoretical prediction that the presence of a high performer constrains the expression of proactive disposition as proactive motivation. To strengthen confidence in the validity of these findings, it seemed important to constructively replicate the general effect using different measures of proactive performance and tap into what motivates this differential effect. Next, I tested the full model and examined

specific mechanisms in Study D.

SECTION 3.6. STUDY D: VIRTUAL TEAM SIMULATION

METHODS

Purpose and Sample

Next, I sought to test the full model in a highly controlled context in order to eliminate any potential influence from other members of the team (i.e., shifts in the “high performers” behaviors due to the manipulation) and to enable objective assessment of proactive performance. Participants consisted of 241 undergraduate business majors that were enrolled in one of their program’s capstone courses. The students volunteered to participate in exchange for partial fulfillment of their course research participation requirement.

Design, Manipulations, and Procedures

For Part 1 of this two-part study, participants completed a pre-survey in which I obtained informed consent for the study and surveyed participants’ demographic information and individual differences on personal initiative. Upon completion of the survey, they were directed to a participant-scheduling site to sign up for the in-lab portion of the study, which I described as a study of leadership development and decision-making in virtual teams. Part 2 took form of a two-condition, between-subjects design. The experiment lasted 35 minutes.

Participants were told that this study is being conducted in conjunction with a leadership course for part-time MBAs. To help legitimize the rouse, I sent a reminder email to all enrolled participants, it was imperative that arrive on time (1) because we were coordinating virtually across multiple sites and (1) because the study requires that

“MBA students, who serve as team leaders, be at a site at the same day and time as participants in order to work together”.

This was an individual-level study, however I created a false virtual team context using advanced features of the Qualtrics survey tool to induce a sense of team experience and enhance psychological realism. Participants had no real contact with other participants or an “MBA student leader” but rather were responding to different pre-constructed, pre-timed chat messages and feedback. Out of an abundance of prudence, I used a real first name and profile for the MBA student, and secured their permission to use his name, photo, and profile in case participants searched online while the study is in progress.

When participants arrived to their scheduled sessions, experimenters directed them to a virtual workstation (i.e., cubicle with computer), notified them that they would be connected to other teammates and an MBA leader to work as a virtual team, and provided step-by-step instructions and a password for how to “log in to the virtual environment and connect with your team.” Once in the study, the MBA leader provided instructions (pre-populated text set up like an instant message chat) and informed “the team” that they were working as a recruitment team and would conduct resume reviews of job candidates in a series of rounds and would provide a strong, clear team recommendation that the team leader would collectively compile and deliver. To start, they were asked to write a short bio to introduce themselves to their three other teammates and leader. Once “all team members were finished” (i.e., 15 seconds after the participant finished), the simulation auto advanced and displayed the just-completed bio of the participant along with pre-stocked team member bios on the next screen. The self

leader welcomed the team members, provided some background about himself, and outlined the task objectives.

Next, the MBA leader sent participants a short job description for an open entry-level management consulting role, gave them 2 minutes to review it, and then asked them to share their ideas via the team chat window on what types of experience or abilities should the team look for in resumes that would fulfill the needs of the job description. The simulation again presented their ideas and pre-written ideas from their teammates. The leader asked several clarifying questions to different members to simulate dynamic interaction.

Then, the MBA team leader told them that their team had three resumes to consider for this position. Members were to critique all three resumes, one per round (i.e., three rounds). MBA leader informed participants that he would review recommendations and provide them some quick feedback at the end of each round so that member could improve their critiques in subsequent rounds. Each member of the team was given 5 minutes per round to review the resume, evaluate the fit of the candidate, and provide open-ended feedback to the leader about and strengths or concerns about the candidate. After each round, participants completed a survey of their experience, in which I measured participant proactive motivational states (state self-efficacy, felt responsibility, and social inhibition). Then, participants received the leader's feedback on their resume critique and those of their team members' on the prior round.

The content of the performance feedback served as the manipulation. In the control condition, the leader's feedback to all four members (i.e., to the participant and the three fictitious, virtual teammates) was similarly average feedback. In the

experimental condition, the only change was that the leader offered one of the fictitious, virtual teammates markedly better performance feedback on his/her review (using a gender neutral name).

After three rounds of resume critiques and performance feedback, the leader asked each participant to select their top candidate from the three resumes. Then, he asked the participants to help him “make the case” that he could use to justify why this is the best candidate, including anticipating arguments against this candidate and proactively identifying issues or questions his MBA classmates will raise.

Measures

I used established measures and six-point Likert-type response scales anchored to 1 (“Disagree strongly”) and 6 (“Agree strongly”), unless specified noted otherwise.

Personal Initiative. I assessed personal initiative using the same approach and 7-item measure by Frese and Fay (2001) as Study C.

Proactive Motivation. I chose three established variables that conceptually mapped to the three motivational states identified by Parker and colleagues in their framework of proactive motivation: “can do, reason to, and energized to” (2010: 1). First, I used self-efficacy to capture “can do” motivation. I used Tierney and colleagues’ 3-item measure of creative self-efficacy (1999), adapting this measure to the context. Items included “I felt confident in my ability to review the resume and provide recommendations”, “I was good at analyzing this job applicant’s capabilities,” and “I had a knack for evaluating this resume.” This adaptation of items to the analytical task context was motivated and guided by recommendations of Morgeson and colleagues (2007) who advocate for capturing self-efficacy with measures that are specifically task-

relevant to improve explanatory power. Second, I measured “reason to” motivation the 3 highest factor loading of the (5-item) measure of felt responsibility developed by Morrison and Phelps (1999), which it based on the conceptualization by Hackman and Oldham (1976; 1980). Sample items were “I felt a personal sense of responsibility to contribute in this group” and “I felt obligated to try to introduce new ideas and contribute where appropriate.” Third, I operationalized “energized to” motivation using social inhibition, which I measured with six items adapted to the team task context from the short form of the Social Interaction Anxiety scale (SAIS; Mattick & Clark, 1998). The items selected were the subset of the scale designed to capture the social self-consciousness dimension of social interactional anxiety. Sample items included “I was conscious of the way I presented myself in the team”, “I was worried about making a good impression in this team” , and “I felt hesitant to share my ideas.”

Manipulation and Suspicion Checks. To verify that the manipulation achieved its intended effect, I asked participants to rate the performance of each peer. I leveraged the job-role performance scale developed by Welbourne and colleagues (1998), asking individuals to recall what kind of feedback the MBA leader gave each team member from 1 (“needs improvement”) to 5 (“excellent”). Second, to assess whether participants believed that they were in a real virtual team, I asked them “for data integrity purposes, what do you think were the purposes of this study?” The vast majority (76%) of students believed it was about the challenge of virtual team collaboration and decision-making biases in resume reviews.

Proactive Performance. The task facilitated an objective measure of participants’ performance at the end of the experiment. Four independent coders, blind to condition,

rated quality the open-ended justifications and proactive arguments that participants offered to accompany their candidate recommendation (i.e., how effective was the participant in proactively making a case for his/her choice of applicant?). The scores, rated on a 7-point scale (1 = ineffective, 7 = extremely effective) were averaged into a composite score given that agreement (median $r_{wg} = .92$) and reliability ($ICC(2) = .90$) were both excellent.

RESULTS

I removed 31 participants from the dataset (12.8%). Participants eliminated included those who either experienced technical problems during the session or responded that they were suspicious if they were in actual teams. The believability hinged partly on the students' engagement within the simulation. For example, if participants were non-communicative or offered little to no critique during the resume review round, they would still receive a moderate rating and reasonable qualitative comments from the MBA leader. In such cases where students were not trying, these qualitative comments would have seemed baseless. With the retained sample of 210 cases, I proceeded with analyses.

Manipulation and Suspicion Checks

Using analysis of variance (ANOVA), I checked the manipulation by condition by contrasting how participants reported the performance of “Jordan”—the teammate whose performance was manipulated. Results indicated that participants in the experimental (high performer) condition reported that Jordan received significantly higher performance ratings than participants in the control condition ($M = 4.64$ v. $M = 3.09$, respectively; $F_{(1,210)} = 322.41$).

Hypothesis Testing

Table 11 presents descriptive statistics, including means, standard deviations, and correlations of all study variables. I dummy coded condition (0 = control, no high performance present; 1 = experimental, high performer present) and conducted ordinary least squared hierarchical regression to assess whether data supported hypotheses. Table 12 displays the results of these tests.

Hypothesis 1 predicted that peers' proactive disposition would be positively related to (a) self-efficacy and (b) felt responsibility, while (c) negatively related to self-consciousness. Analyses offered support for Hypotheses 1a and 1b, but not 1c (Model 2a, 3a, and 4a, respectively).

Next, I followed moderated regression procedures by Aiken and West (1991) to examine the proposed first stage interactions of personal initiative and condition on facets of proactive motivation. Using their recommended two-step process, I regressed each of these motivational states, first, on personal initiative, then simultaneously on personal initiative, condition, and their interaction term. Findings indicated a significant interaction on each motivational state.

Insert Tables 9 and 10 about here

To understand the nature of these interactions and to examine hypotheses, I calculated the simple slope and tested whether they were significantly different from zero (cf. Aiken & West, 1991). Hypothesis 3a proposed that the presence of a high performer would weaken the positive relationship between personal initiative and self-efficacy. Inspection of slopes offered support for this effect. The relationship between personal initiative and sense of self-efficacy during the team task was positive and significantly

difference from zero ($b = .81; p < .001$) when there was no high performer in the team. When a high performer was present, the relationship was positive but of a lower magnitude and not significantly different from zero ($b = .22; n.s.$). Similarly, Hypothesis 3b expected that the presence of a high performer would constrain the positive relationship between personal initiative and felt responsibility. Results demonstrated that personal initiative and felt responsibility were positive and significant when no high performer was present ($b = .54; p < .01$), but not when a high performer was present ($b = .02; n.s.$). Next, Hypothesis 3c proposed that the presence of a high performer would attenuate the negative relationship between personal initiative and social inhibition. Examination of simple slopes revealed the opposite effect. In the presence of a high performer, individuals higher on personal initiative were significantly less inhibited ($b = -.56; p < .05$). In the absence of high performers, personal initiative trended positively but did not significantly relate to social inhibition ($b = .21; n.s.$) To facilitate interpretation, I plotted these interactions appear in Figure 6.

To understand these effects better, I used Edwards and Lambert's (2007) integrative test of moderated mediation to examine the moderated mediation models (i.e., personal initiative \rightarrow motivational state \rightarrow proactive performance). This bootstrapping approach facilitated bias-corrected estimation of first stage, second stage, indirect, and direct (IV \rightarrow DV) under proposed moderating conditions. Table 13 summarizes these effects. In sum, Hypotheses 3a and 3b received support, but not 3c. Interestingly, the effect was contrary to proposed hypotheses—individuals who were higher on personal initiative were *less* socially inhibited, an effect that I expand upon further in the Discussion.

I examined whether proactive motivation, as function of self-efficacy, felt responsibility, and social inhibition (reverses), positively predicted members' contributions. In support of Hypothesis 4, proactive motivation positively related to both length of participant contribution (i.e., wordcount) of team member contributions ($\beta = .14; p < .05$) and independent rating of quality of proactive arguments ($\beta = .17; p < .01$). Lastly, I followed procedures specified by Edward and Lambert's (2007) and results of tests of moderated mediation supported Hypothesis 5a and 5b: the presence of a high performer moderated the mediated relationship of personal initiative on proactive performance through (a) self-efficacy and (b) felt responsibility. However, the effect of personal initiative on proactive performance, through social inhibition, did not vary as predicted across conditions, leaving Hypothesis 5c unsupported. Table 13 displays these effects by stage and motivational state.

DISCUSSION

In this essay, I sought to address two central questions: (1) how does the presence of a high performer *impact teammates' motivation to take initiative?*, and (2) what *specific characteristics* of team members may make them more or less susceptible to the motivational influence of a high performer? Integrating principles from theories of proactive motivation with trait activation theory, I proposed and found that high performers in teams constrain proactive motivation and contributions of individuals predisposed toward taking initiative. Findings from these two studies highlighted that the presence of a high performer can significantly impact the motivation of even their highly proactive peers. Results demonstrated that high performers dampened the positive relationships between peers' personal initiative and self-efficacy and felt responsibility.

Interestingly, and contrary to predictions, the reduced social inhibition of more proactive peers was facilitated rather than reduced. These motivational effect also translated to less proactive contributions from peers who are naturally predisposed toward proactivity.

The majority of investigations on personal initiative and its conceptual cousin, proactive personality, have identified how they relate to and interact with other traits (e.g., Grant, 2013b) and motivate behaviors at work (for quantitative review, Fuller & Marler, 2009). These studies have amassed evidence of the benefit of dispositional proactivity to motivation, valued work behaviors, and career success (Maurer & Chapman, 2013; Seibert et al., 2001). However, no examinations to date have identified and investigated contextual factors that de/activate these motivations and behaviors. It seems an important first step to show that more proactive individuals not only take initiative to shape their environment, but also that cues from their environment can also meaningfully diminish these contributions. As proactivity can sometime expose individual at work to risk (Grant & Ashford, 2008; Grant, Parker, & Collins, 2009; Morrison & Phelps, 1999), it would be interesting for future work to unearth additional proactivity-context combinations to advance understanding of whether there may be addition surprising consequences of proactivity in certain situations.

Along with others, Parker and her colleagues (2006; 2010) have contributed greatly to cumulative knowledge on proactivity—and individual traits, contexts, and motivations that drive it. Still, as these and neighboring literatures have flourished, far less is understood about how antecedents of motivation and behavior combine to influence proactivity (Parker & Collins, 2009). Related, studies in the related literature on voice has shown that leadership behavior and individual differences often interact to

affect employee willingness to voice (for review, Morrison, 2014) as well as supervisor reception to it (Whiting, Maynes, Podsakoff et al., 2012; Zhang, Wang, & Shi, 2012). This seems an important next direction in which to break theoretical ground given the increased reliance on more relational forms of work (Chen & Tesluk, 2011; Grant & Parker, 2009).

One of the unexpected findings was the nature of the interaction between peers' personal initiative and the presence of a high performer on peers' sense of social inhibition. Without a high performer in the team, there was no significant difference on peers' social inhibition as a function of their own dispositional personal initiative. When a high performer was in the group, social inhibition sharply declined as a function of personal initiative. Two things may be driving this effect. First, high performers seem to increase inhibition among peers who are lower in personal initiative. The high performers' presence may actually act as a trait-facilitator of low personal initiative on social inhibition: those who preferred not to take charge felt even less social motivation to do so when there is a talent alternative in their midst. Second, the high performer's presence may simply relieve the pressure felt by high personal initiative peers: both felt responsibility and felt need to socially self-regulate and restrain behaviors.

**CHAPTER 4: ESSAY 3 – WHEN DIFFERENCES CREATE DEFERENCE: PROS
AND CONS OF MEMBER PERFORMANCE DISPARITY FOR TEAM
INNOVATION**

SECTION 4.1. INTRODUCTION & CONCEPTUAL DEVELOPMENT

Innovation describes both the development of novel, useful ideas (i.e., creativity), and successful implementation of those ideas (West & Farr, 1990). This requires converting concepts into tangible products and services (Baer, 2012). As nature of work becomes increasingly complex, dynamic, and uncertain (Griffin, Neale, & Parker, 2007), innovation has become central to organizational competitiveness and growth (Lovelace, Shapiro, & Weingart, 2001; Prahalad & Krishnan, 2008; West & Farr, 1990).

Consequently, scholars and practitioners alike share a common interest in unearthing ways to foster team innovation. As both team creativity and effective implementation are necessary components, team innovation requires members to both explore and exploit collective expertise and resources.

More than any other unit of work, teams serve as the organizational epicenter for innovative performance (Anderson et al., 2004; Hülshegar, Anderson, & Salgado, 2009). To date, research has revealed a number of team states and processes that promote team innovation, including support for innovation, participative safety, and task orientation (for review, Hülshegar et al., 2009). Yet, we still have little by way of prescriptive knowledge about inputs to team innovation, especially that which would inform leaders how to compose teams to foster processes that fuel innovation. One noteworthy exception is recent research on the impact of cognitive styles (i.e., conformity and attention-to-deal) on member exploration and exploitation (Miron-Spektor, Erez, & Naveh, 2011). This

seems a critical omission, as composition of members (i.e., staffing) represents a tractable input that can shape social and task processes (Hackman, 1992; McGrath, 1964). In particular, team composition impacts the social hierarchy, or members' implicit social standing with respect to their respective prestige, prominence, and social value (Magee & Galinsky, 2008).

Social ordering in teams is ubiquitous and has “a profound impact on group functioning” (Anderson & Brown, 2010: 80). Social hierarchies form quickly, especially in the absence of formalized hierarchy (i.e., when explicit hierarchies are flatter; Fiske, 2010; Ridgeway, 1982; Tiedens & Fragale, 2003). Typically, teams charged to innovate adopt a flat hierarchy or cross-functional design to promote flexibility (West & Anderson, 1996). This leaves them especially vulnerable to formation of salient social hierarchies. With the addition of a high performer to team, a steeper social hierarchy is likely to result since past performance serves as one of the foremost signals of status in a work context (Berger et al., 1977). I expect performance differentiation orders an implicit social structure at team formation that is likely to affect the entirety of the team development process, including development collective psychological states, and subsequently emergence of task and interpersonal processes that affect teams' ability to perform and innovate (Kozlowski et al., 1999; 2009).

While widespread agreement exists that social hierarchy is highly consequential to work groups and team processes, the results of the effects of social hierarchy on team processes performance remain equivocal (Anderson & Brown, 2010). Scholars have suggested that the nature of this relationship is contingent on legitimacy of the hierarchy (i.e., the extent to which the social order is viewed as appropriate; Halevy, Chou, &

Galinsky, 2011). This legitimacy seems contingent upon the nature of the team performance outcomes and the processes required to bring them about. For example, if team success principally depends upon exploiting the knowledge of an expert, a performance hierarchy may prove quite valuable. Consistent with this view, Bunderson (2003) found that teams performed better in a judgment-accuracy task when members were able to identify context-relevant experts and grant them influence. In this instance, social hierarchies promoted efficiency through exploitation and deferral, which can promote effective implementation—a necessary component of innovation.

However, the first stage of innovation depends upon creative idea generation (Hülshager et al., 2009; Woodman, Sawyer, & Griffin, 1993) and there is reason to believe performance hierarchy limits exploration among members. For instance, studies showed that dominance of one or a few perspectives within the team tends to hamper creativity (Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; Paulus, 2010). The conflicting nature of these findings has led scholars to advocate for greater understanding and empirical investigation of social hierarchy's impact on teams (e.g., Anderson & Brown, 2010). Such an investigation seems particularly relevant for the study of team innovation. On one hand, the divergent participation is likely to maximize creative exploration in teams; however, on the other hand, efficient, orderly, convergent participation is critical for success in idea implementation. I argue that status hierarchy, as created by performance disparity, differentially impacts these two innovative pathways.

Consequently, in Essay 3, I develop a model that delineates how performance disparity—as induced with the presence of a high performing—creates a more

pronounced social hierarchy that can both hinder and promote contrasting team processes that are both essential to innovative performance. To do so, I draw upon theories of team innovation from the management literature and, theoretical views of social motivation, social status, and disparity from social psychology literature. Knit together, these literatures help to frame explanation of how high performers—beyond their own task contributions—shape the development of their teams interaction and may simultaneously hurt and help team processes that drive innovation.

I propose performance disparity hampers team processes characterized by *divergent participation* (i.e., exchange of differing information, alternative ideas, opposing views, and differing insights across members of a team) such as task conflict (i.e., team member disagreement over ideas and opinions related to accomplishing the collective task; Jehn, 1995; 1997). In contrast, I expect that performance disparity promotes team processes characterized by *convergent participation* (i.e., efficient exchange, harmonization, synchronization, and coalescence efforts and ideas) such as team coordination (i.e., team member orchestration of the “sequence and timing of interdependent actions”; Marks, Mathieu, & Zaccaro, 2001: 363). Reduced divergent participation hinders quality and quantity of creative ideas produced in the team, while convergent participation enables ideas to be collectively agreed to—or at least acquiesced to—and then shepherded into tangible products. To explain this, I introduce the concept of social concerns in teams adapted from work on social inhibition, facilitation, and anxiety (Mattick & Clark, 1998), which describes a feeling among members of the team of increased social ambiguity and social anxiety, activated social attention to the social context. I position as an important mechanism that links these parallel team processes. I

propose test this theoretical model in a team laboratory experiment. Figure 7 graphically summarizes this model.

Insert Figure 7 about here

Through this project, I seek to offer several important contributions the literatures on team innovation and team composition by offering a more balanced view that considers both the drawbacks and advantages of social hierarchies in teams. First, I extend the chain of insights on team innovation by explicitly considering how leaders might staff teams to foster innovation. This represents an area of research that has been largely neglected to date, with the noteworthy exceptions of studies on background and demographic diversity (e.g., Milliken & Martins, 2996; Shalley & Gilson, 2004), shared goals (e.g., Tjosvold, Tang, & West, 2004) and team size and tenure (e.g., Stewart, 2006). I consider how the composition of the social hierarchy, as influenced by the presence of high performers, shapes team processes. Second, my research responds to calls to address how social hierarchies can affect team performance by taking a more nuanced view of the *nature* of team performance. Decoupling the building blocks of team innovation enables consideration of *how* social hierarchy can be both functional and dysfunctional for teams who are focused on innovating. In doing so, I seek to offer a reconciliatory explanation for the inconsistent link between social hierarchy and team performance, or what others have referred to as “the innovation dilemma” (Zaltman, Duncan & Holbeck, 1973).

SECTION 4.2. THE CONTRASTING EFFECTS OF SOCIAL HIERARCHY AND TEAM INNOVATION

Social Hierarchy & Team Innovation

Unless all teammates are similarly high performing, the presence of a high performer in action teams heightens performance disparity, or the unequal dispersion of a valued resource or (i.e., one is privileged over many; Harrison & Klein, 2007). The addition of a high performer to the group, steepens status hierarchy among team member and, based on comparison, pushes others down the hierarchy. Disparity is highest in teams when all of a valued resource or asset is centralized with one member (Wasserman & Faust, 1994; see also DeRue, 2011). Performance disparity is at its maximum when the performance of one member meaningfully outranks other members (Harrison & Klein, 2007). Higher performance disparity implies steeper stratification or social hierarchy (Grusky, 1994), which describe an implicit ranking of members with respect to their social value (e.g., performance contributions; Bales, 1958; Magee & Galinsky, 2008). Under such conditions, I expect lower-performing members experience reduced social motivation and less concerns about the social context since group order has been disambiguated by performance disparity (Mattick & Clark, 1998).

Therefore, I propose that performance disparity constrains peers socially by introducing salient social hierarchy and reduce their social concerns. I characterize social concern as a form of activated social motivation that reflects the members' elevated anxiety and socially facilitated motivation to engage. Consideration of meaningful team states generally assumes that collective perceptions need requisite time to emerge and need to be shared among members to be consequential to team performance (Kozlowski & Klein, 2000). Social concern in teams differs from neighboring constructs, such as psychological safety, which reflects a shared sense among members that it is safe to speak up without fear of being punitively judged or ridiculed (Edmonson, 1999).

Specifically, members' social concerns reflect an activated energy, heightened anxiety, discomfort and lack of ease. I expect that when members' collective social concerns heighten, it will functionally influence team shared processes. To understand how social hierarchy and resulting social concerns shape team innovation requires separate consideration of its core components: team creativity and team idea implementation.

To maximize innovative performance, teams must create a balance social freedom to dynamically co-produce new, useful ideas—yet also achieve social order to efficacy implementation of those ideas into tangible products and services (West & Farr, 1990). Therefore, a great idea that is poorly executed fails to qualify as innovation as does an unoriginal idea with exceptional execution. Rather, innovation requires seemingly contrasting team processes, which social hierarchy may simultaneously constrain and facilitate.

The Creativity Path

Team creativity is a necessary antecedent to team innovation (Zhou & Shalley, 2008). Team creativity describes the “production of novel and useful ideas concerning products, services, processes, and procedures by a team of employees working together” (Shin & Zhou, 2007: 1715). When the creative process among teammates is at its best, it is all-absorbing (Csikszentmihalyi, 1997); however, social hierarchies in groups have been linked with “suppression of creativity” (Harrison & Klein, 2007: 1206). This is likely because team creativity requires divergent participation that includes fluid exchange of ideas, information, and insights across members (Paulus, Nakui, & Putman, 2005; West, 1990).

Consistent with this view, review of the literature indicates the steeper social

hierarchies pose a disadvantage to teams as they increase conformity, resentment, withdrawal, and deferral (e.g., Homans, 1961; Hollingshead, 1996; Pfeffer & Langton, 1993) while decreasing exploration (e.g., Perretti & Negro, 2006). Consequently, flatter social hierarchies in teams may be more effective when team success depends upon tapping a broad range of opinions, experiences, and perspectives (Anderson & Brown, 2010). Consistent with this view, more pronounced social hierarchies have prove to be problematic for team effectiveness by decreasing the quality of collaborative communication among members (e.g., Christie & Barling, 2010).

Several studies offer evidence in support of this argument. For example, when high performers are present in the team, members have been found to overweight their ideas (Stasser & Birchmeier, 2003). Steeper hierarchies hinder critical thinking and the sharing of unique opinions (Tannenbaum, 1957). Further, status differences among members can constrain colleague interactions and prompt members to underweight the creative value of their peers (Milliken, Bartel, & Kurtzberg, 2003). Consequently, I expect that steeper status hierarchies triggered by performance disparity negatively related to divergent forms of team participation such as task conflict, because it reduces team members' social motivation to contribute.

Hypothesis 1. In action teams, (a) member performance disparity in teams negatively relates to divergent participation as reflected by team task conflict (b) mediated through its effect on social concerns among members.

Creativity at the team level grows in complexity as members not only generate their own ideas, but also listen to others, integrate knowledge, and coordinate timing of contributions and thinking about the contributions of others (Paulus, 2010). Creative co-

production is cognitively demanding (Amabile, 1993) and requires dynamic, divergent participation (Zhou & Shalley, 2010). This includes being exposed to dissent and alternative ideas that can prompt creative thinking (Nemeth & Nemeth-Brown, 2003).

Hypothesis 2. In action teams, divergent participation (i.e., team task conflict) positively relates to team creativity.

The Implementation Path

Implementing novel, useful ideas is what transforms team creativity into team innovation. Idea implementation requires that teams succeed in converting concepts, designs, and plans into tangible reality. This process often involves skillful navigation of the social environment (Baer, 2012; Yuan & Woodman, 2010). Social hierarchies formed can help teams by creating social order, simplifying interactions, and centralizing coordination (Halvey et al., 2011; Magee & Galinsky, 2008). This view is consistent with functional theories that contend that clear, pronounced hierarchies promote work efficiency and simplicity of communication (Anderson & Brown, 2010). In support of these arguments, review of the literature indicates that steep social hierarchies help to reduce conflict, promote coordination, efficiently divide work, and improve decision-making (Anderson & Brown, 2010; Gruenfeld & Tiedens, 2010; Halevy, Chou, & Galinsky, & Murnighan, 2012; Kelter, Gruenfeld, & Anderson, 2003). For example, recent research showed social hierarchies can facilitate coordination among colleagues by establishing patterns of deference to one another (Kwaadsteniet & van Dijk, 2010)

Greater social order among members can also clarify communication and centralize decision-making by reducing social motivation of members to challenging the

process by which ideas are implemented. Rather than having to build consensus, teams in more pronounced hierarchies can make swift progress toward implementation by looking to the “most talented and capable members, who make more decisions for the group” (Anderson & Brown, 2010: 68). In the context of a hierarchy rather than flat team, lower-performing members are more likely to cooperate with a higher performer due to his or her higher status and less likely to create conflict (Halevy et al., 2011). These processes, enabled by member reluctance to challenge and preference for deferral, promote convergent participation.

Hypothesis 3. In action teams, (a) member performance disparity in teams positively relates to convergent participation as reflected by team coordination (b) mediated through its effect on social concerns among members.

Effective implementation of creative ideas is maximized when teams can avoid process loss that occurs when communication breaks down or misunderstandings occur (Steiner, 1972). Navigating the idea implementation process requires deft coordination (i.e., orchestration and timing of members’ interdependent actions; Marks et al., 2001). Achieving clear, centralized agreement on teamwork processes enables more efficient implementation of ideas. A wealth of studies have offered compelling evidence that successful coordination of teamwork is paramount to team efficiency, production, and adaptation (e.g., Ancona & Caldwell, 1992a; 1992b; Pinto, Pinto, & Prescott, 1993; Reagans, Argote, & Brooks, 2005).

Hypothesis 4. In action teams, convergent participation (i.e., team coordination) positively relates to team idea implementation.

SECTION 4.3. STUDY E: ACTION TEAM EXPERIMENT

METHODS

Purpose, Sample, & Design³

I tested this model using a team experiment, in which I directly manipulated performance disparity within each team. Through random assignment and direct manipulation, this approach enabled me (1) to rule out the possibility of an omitted third variable affecting the relationships between focal variables (i.e., an endogeneity issue), and (2) to cleanly manipulate performance disparity to enable causal inference.

Participants were undergraduates enrolled in management courses. The experiment took the form of a two-part, 2 condition (performance disparity: high versus low) between-team design. For Part 1, participants completed an individual online task (pre-survey assessment). For Part 2, participants came to the lab to complete an open-ended innovative task in teams. Each three-member team was randomly assigned into condition prior to arriving at the lab. In total for Study E, I collected data from 210 participants nested within 70 teams—35 teams per condition.

Participants were incentivized to opt-in in order to fulfill a portion of the research requirement associated with their management course. To further motivate participation, students were informed that the top performing teams at the end of the semester earned \$150 to divide among members (\$50 per person). Cash was awarded the end of the semester to members of the five teams whose design was deemed to be most innovative, based on the ratings of the photo of their final product by three independent coders.

Manipulation and Procedures

³ Study E shares the task contexts of its experimental design with Study C; however, the experiments were run in separate semester, which minimized any samples overlap. Similarly, other than the manipulation, all variables used in Study C are distinct from those used in Study E. Lastly, they were each focused on phenomenon at a different level of analysis.

For Part 1, participants were sent a link to their school email, inviting them to participate in a management research on leadership, innovation, and teamwork. If they elected to participate, they were asked to complete a survey and then work through a series of virtual tasks (e.g., the remote associates test; Mednick, 1962, unusual uses task; Guilford, 1967) in advance of coming to the lab. The survey explained that their performance in a series of tasks may impact their team when they come into the lab. The survey noted that the tasks are designed to be very challenging and measured “creative performance, strategic thinking, and innovative judgment.” Part 1 served two functions. First, it enabled collection of demographic and individual difference variables. Second, it offered a platform to give assessment-oriented tasks to the participants, which helped to legitimize the performance manipulation.

Part 2 occurred in the research lab over the course of one hour. Upon coming to the lab, students were told that we were working with the School of Engineering to study the innovation process in teams. The experimenter asked participants to sign-in, escorted them each to a workstation, and asked them to read a task preview sheet (see Appendix C). The experimenter then reminded them of the series of online tasks they completed on “creative tasks, strategic thinking, and innovative judgment” and gave participants a manila envelope with their name on it. The envelope contained a report of their performance and summarized the performance of other members of their team. Similar to Study C, student performance reports were randomly assigned. In the control condition (i.e., no performance disparity), all students received a score of 3 of 10, as did their peers. In the experimental condition (i.e., performance disparity, one participant received a 9 of 10 and the other two participants received a 3 out of 10. Students were told that the report

was generated for them by “Smith Cognitive Analytics” and that understanding the feedback may help them “figure out how to best operate as a team.” Several minutes later, participants are asked to join their team members at a conference table in the middle of the room. The experimenter explained to participants that they would be working together as a team to design an innovative product, asked them to take a minute or two to introduce themselves and to share Part 1 performance results.

After this initial team discussion, the experimenter reviewed key aspects of the task sheet: that teams will be designing and constructing a model for an innovative, state-of-the-art research facility in Greenland. The experimenter explained that they have 26 minutes in total to complete the task, which would unfold in two phases. First, teams had ten minutes to collaborate on their teams design concept, after which the team would verbally describe—in two minutes—their overall design concept for the engineering judges (audio recorded). To facilitate the creative design process, the experimenter provided them with sketchpads and pencils. Second, they would have twelve minutes to refine and implement their concept, using materials that would be provided. Materials were comprised of building blocks of a variety of sizes and colors. Participants did not learn about the type of materials until the implementation phase of the experiment. After the implementation phase, they had another two minutes to present their final innovative model to the engineering judges (videotaped). Upon completion, team members were sent to their individual workstations and asked to complete a survey.

I modeled this task after a study of teams by Woolley (2009), which also used building blocks as a way to create an open-ended task while not requiring specified knowledge that would advantage some team members over others. It thus better enabled

study of collaboration within laboratory setting while still modeling tasks that are common to organizations: those in which members have limited resources (i.e., time and materials) and an overarching goal is set but discretion is left to the team as to how to achieve it.

Measures

All variable were operationalized at the team level of analysis. Unless specified differently, all measures relied upon a 5-point Likert scale ranging from 1, disagree strongly, to 5, agree strongly. Team process variables (i.e., task conflict and coordination) relied upon a direct-consensus composition model, using team as the referent (Chan, 1998).

Social Concern in Teams. I rely upon the six work-relevant items from the social anxiety (i.e., activated social concern) subscale of the Social Interaction Anxiety scale (SAIS; Mattick & Clark, 1998). Sample items were “I have been worried about being ignored in the team”, “I was nervous to express my ideas or suggest alternative to my teammates,” and “I felt very at ease working with these team members” (reverse-coded). An increased sense of social concern and anxiety is a personal experience. While I proposed team members can collectively experience it based on the same stimulus to make it a collective experience, treating it as observable or measuring members’ perceptions of how others feel seems to disregard the core conceptual meaning of activated social concern. That is to say, in work teams social anxiety can be collectively higher, however, I do not conceptualize of it as a shared experience. Accordingly, I operationalized social concern in teams using a referent shift model in which the individual remains the referent (cf. Chan 1998).

Team Task Conflict - Divergent participation. I assessed team task conflict using the 4-item scale crafted and validated by Jehn (1995). Indicators of this included “members disagreed about opinions regarding the activities being done,” “there was conflict about ideas in that team,” “there were differences of opinion in the team”, and “there was conflict about the decisions made in the team.” Examination of aggregation statistics revealed that team membership explained 56% of the variance in team task conflict ($ICC(1) = .56$) and $ICC(2)$ indicated acceptable reliability of team means $ICC(2) = .30^4$, $F_{(68, 204)} = 1.42$, $p < .05$; Bryk & Raudenbuch, 1992; Bliese, 2000). Additionally, data suggested good interrater agreement among teammates $r_{wg} = .88$ (James, Demaree, Wolf; 1984; 1993). Taken in tandem, these statistics supported aggregation of individual member responses to task conflict to the team level.

Team Coordination - Convergent participation. I captured convergent participation using Lewis’ (2005) measure of team coordination. Sample items included “our team works together in a well-coordinated fashion,” and “we accomplish tasks smoothly and efficiently.” Supported by aggregation statistics, I averaged team members’ ratings to reflect their team’s score. $ICC(1)$ indicated that 67% variance in team coordination perceptions was attributable to team membership and $ICC(2)$ indicated that team means were reliable ($ICC(1) = .67$; $ICC(2) = .41$, $F_{(68, 204)} = 1.71$, $p < .01$; Bliese, 2000). Members also showed agreement in their perceptions of team coordination, $r_{wg} = .93$ (James, Demaree, Wolf; 1984; 1993).

⁴ This $ICC(2)$ value for Team Task Conflict is on the low end of the acceptable range. This is likely due to the fact that team were similar in type and small in size (cf. Bliese, 2000; 2002). Joint evaluation of aggregation statistics supports the decision to aggregate (cf. LeBreton & Senter, 2008).

Team Innovation. Trained researchers, who were blind to hypotheses, used recorded portions of the session to code the two facets of team innovation—team creativity and team idea implementation.

Team Creativity. The two-minute audio pitch (recorded at the midpoint of each team's work session) served as the qualitative output used to code for team creativity. After listening to each team pitch, the three coders independently provided ratings for how effective the team was in creating a design concept that was (1) *new and unique* and (2) *useful*, using a 7-point scale for each dimension (-3 = ineffective, 3 = extremely effective). The two ratings were combined to represent the team's overall creativity. I averaged across raters. A decision that aggregation statistics supported: $r_{wg} = .89$ and $ICC(2) = .87$.

Team Idea Implementation. At the end of each session, while the participants completed individual surveys of their experience in the team, experimenters took five photos of each model as constructed by building blocks (i.e., the top view and each of the four side-views of each model; see Appendix D for examples). Independently, coders reviewed these photos and watched the two-minute videos that teams recorded at the end of their implementation phase. Based on these qualitative inputs, coders rated each team based on how effective they were in *implementing* their design. Coders used the same 7-point scale that ranged from -3, ineffective, to 3, extremely effective, and again achieved excellent agreement and reliability ($r_{wg} = .86$; $ICC(2) = .90$). Their ratings on team idea implementation were also averaged for each team.

RESULTS

Table 14 summarizes means, standard deviations, and zero-order correlations of all study variables at the team level. Two teams were omitted from analyses because each team had one member who had participated in a similar team simulation in the prior semester (i.e., Study D). The retained sample included 68 teams and a total of 204 participants. Participants were 62% male and averaged 22.6 years of age.

Manipulation Check

I measured the effectiveness of the performance manipulation to ensure that the induced disparity was realized and perceived by participants. At the end of each session, I captured members' recollection of the performance results that each member received from Part 1 of the study. Sample t-tests demonstrated that participants reported significantly higher past performance results for the designated high performer compared to themselves and their other peer in the experimental condition ($M = .73$ versus $M = -.77$; range -1, low, to 1, high; $t_{41} = 13.83, p < .001$). In control group by contrast, peers did not report any meaningful past performance results differences between the focal and non-focal performers ($M = -.89$ versus $M = -.92$; $t_{43} = 1.104, n.s.$). Together, these estimates indicated that the manipulation successfully influenced peers' perceptions of performance disparity.

Hypothesis Testing – Hierarchical Regression

As all variables operate within a single level of analysis, I tested hypotheses using hierarchical ordinary-least squares regression (OLS) and followed the approach specified by Aiken and West (1991). Table 15 summarizes these results. My hypotheses specified direction (i.e., positive or negative) of each relationship, a priori. Therefore, I relied upon one-tailed significance tests (cf. Fisher, 1935; 1971).

Hypothesis 1a predicted that performance disparity would negatively relate to task conflict. Supporting this hypothesis, results demonstrated that performance disparity did indeed decrease team task conflict ($\beta = -.36, p < .01$). Hypothesis 1b further specified that negative impact of performance disparity on task conflict would be mediated by reduction in social concerns among members. Findings showed in teams with high performance disparity compared with teams with no disparity reported lower social concern ($\beta = -.21, p < .05$). However, the positive relationships between this activated social motivation and task conflict fell short of significant ($\beta = .13, n.s.$). Further, using the Monte Carlo method for assessing mediation (MCFAM), a bootstrap-based approach advocated by Mackinnon, Lockwood, and Williams (2004), I tested the indirect effect of performance and on team task conflict. The advantage of this approach over Sobel's (1982) test of mediation is that it better accounts for the non-normal distribution of the $a*b$ effect estimate (MacKinnon et al., 2004). I used the online tool created and describe by Selig and Preacher (2008), which facilitate estimation of a confidence interval in R. This effect trended negatively (-.03) but was not significant $CI_{90} = [-.088; .012]$. Therefore Hypothesis 1b was unsupported.

Hypothesis 2 contended that divergent participation in the form of team task conflict would positively relate to team creativity, which received support ($\beta = .36, p < .05$). I also calculated the indirect effect of performance disparity on team creativity (through team task conflict). Analyses revealed a significant, negative indirect effect (-.16; $CI_{90} = [-.31; -.05]$).

Hypothesis 3a stated that performance disparity would positively relate to team coordination. This received support, with findings demonstrating a significantly positive

relationship between performance disparity and team coordination ($\beta = .20, p < .05$). Hypothesis 3b expected that the positive impact of performance disparity on team coordination would be mediated by social concerns, such that greater disparity reduces social motivation due to increased social order, which in turn, increases team coordination. First, using the traditional approach to mediation (i.e., Baron & Kenny, 1986), I assessed the relationship between performance disparity and social concerns, which was significantly negative ($\beta = -.21, p < .05$). Then, I tested the relationship between performance disparity and team coordination first without and then with the term for social concerns. Findings revealed that the significant, positive relationship between performance disparity and team coordination became non-significant when accounting for social concerns in the team. Next, I examined the indirect effects using the approach discussed above. Tests indicated a significant, positive indirect effect (.10; $CI_{90} = [.002; .209]$), which offered support to Hypothesis 3b.

Lastly, Hypothesis 4 stated that convergent participation in the form of team coordination would positively relate to team idea implementation, which findings supported ($\beta = .31, p < .05$).

DISCUSSION

Theoretical Contributions and Practical Implications

With this study and developing essay, I sought to take a step forward in addressing the innovation dilemma. I proposed and found that performance disparity reduced divergent participation (i.e., team task conflict) and increased convergent participation (i.e., team coordination), which translated into less creativity but greater implementation effectiveness. For the implementation path, finding indicated that the

increase in team coordination could be explained by reduced social concerns felt by members. Team members reported less social attention and motivation when there was a clearer status hierarchy based on performance differentiation. The study and findings contribute to knowledge on team innovative processes, composition of innovation teams, and performance differentiation.

First, this study contributes to the team innovation literature by highlighting contrasting processes that differentially impact the key elements of innovation: creativity and idea implementation. Innovation researchers acknowledge that understanding team processes that drive successful innovation is critical for organizational success and sustained effectiveness (Anderson et al., 2004; Klein & Sorra, 1996; Zhou & Shalley, 2010). In kind, increased attention has been paid to examination of team-level inputs and resultant team processes (Hülshelger et al., 2009). What remains absent from the scholarly conversation about antecedent to innovation is consideration of the social dynamics and states that affect task processes. This study underscored the importance of recognizing the impact of a social hierarchy and resulting social concerns of team members, which broadens understanding of a collective state that both fuels or inhibits development of team processes.

Second, this study contributes to literature on how status differentiation explains psychological states and processes in collective units of work (i.e., groups and teams). Joining work on social hierarchies by Christie and Barling (2010), who linked performance-based status inequality in teams to absenteeism and team member health, the theoretical and empirical account offered here suggests that performance-based status hierarchies impact the nature of teamwork interactions. This finding seem to warrants

further examination to deepen theoretical understand of how performance differentiation affect socio-emotional states and interpersonal interactions especially in teams in which members' work is highly interdependence and interactions are frequent.

Third, this inquiry joins and extends the innovation literature by considering how composition of members can meaningfully impact innovation and creativity. Evidence from recent research has highlighted the need to understand this link better, showing that team composition plays an influential role on team innovation. For example a multi-method study showed gender composition interacts with competitive dynamics to reduce creativity (Baer, Vadera, Leeanders, & Oldham, 2014). In her examination of deep-level compositional differences, Post (2012) found that the composition of cognitive style in teams significantly impacted their ability to innovate. Still, when considering the cumulative body of work team innovation, while studies have consider the effect of leaders (e.g., Chen et al., 2013; Eisenbeiss, van Knippenberg, & Boerner, 2008) and of resources (e.g., Anderson et al., 2004) on team innovation, there remains very little cumulative knowledge on how to compose team who are more predisposed to development of processes key to innovation. This works seeks to redress this clear gap.

Limitations and Future Research

Limitations of this study create avenues for future inquiry. First, I considered it important to examine the focal phenomenon initially in a controlled setting—especially in a setting where team resources do not vary and the innovative objective remains the same. However, while greater internal validity is an advantage to this approach, it is at the cost of high confidence in external validity. I tried to minimize this by creating a dynamic, highly interdependent team context in which teams had to collaborate to

product something tangible, had clear deliverables that they understood would be evaluated, and also received clear incentives for being successful. Even so, the lab setting inherently limits psychological realism and future research to assess this model in alternative settings would bolster confidence that results would generalize broadly. Related, I have secured commitment to conduct a second study in engineering firm, examining how team composition effects innovative success of R&D teams.

Second, while outside of the scope for this last essay, it would be interesting explore whether team interventions that emphasize the unique strengths of individual members would change the social space to influence team development and processes that affect team innovation. Particularly, how can we cultivate social motivation while reducing uncertainty of how members can contribute? This may promote team innovation through greater divergent participation while not at the expense of convergent participation. Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005). Most socialization efforts err toward imprinting the goals and reputation of the collective in the hearts and minds of new members; though, research suggests that efforts to spark early discussion of individual strengths—and encouragement of members to apply their strengths—increase employee engagement (Cable, Gino, & Staats, 2013). It would be interesting to examine how a strengths-based team socialization—compared with those that emphasize team goals—could buffer members from the negative effects of social hierarchies.

CHAPTER 4: GENERAL DISCUSSION

In management research, the outcome variable of choice is performance.

Organizational leaders and academicians alike spend substantial time trying to understand how to attract, motivate, incentivize, train for, and enable higher individual performance. While individual performance at work is a core building block of organizational success, examination of its antecedents has eclipsed study of its consequences. The pursuit of what drives performance seems to have also left us satisfied with getting *to* performance. This dissertation departs from the dominant paradigm, seeking to understand the effects of performance.

Ignoring consequences of performance seems riskier as the nature of work grows more collaborative. Increasingly, employees are asked to share, co-produce, and cooperate. Researchers are asked to forge interdisciplinary ties and answer broader research questions. In the U.S., work is steadily shifting from manufacturing sectors to service sectors. With the globalization of work, problems and missions grow more complex, which requires broader expertise. These trends illustrate increasingly relational models, where interactions and social context become more relevant to employee motivation and success. Consequently, it seems limiting to treat individual performance as the distal outcome—the end of the story—or consider individual performance separate from that of colleagues. Rather, we need to understand how *relative* performance difference can spark outcomes, especially negative outcomes that leaders and performers may not expect.

In this dissertation, I shift the focus from what affects individual performance to how individual performance affects interpersonal interactions and motivations. To enable

this, these three essays acknowledged and emphasized the critical features of *relative performance* (i.e., members' performance compared to those in the group and performance disparity). With these essays, I explore unintended consequences of higher performers. Integrating different theoretical perspectives, I offer theoretical and empirical accounts that underscore why being mindful of performance differentiation in teams can advantage leaders and performers. These essays span levels of analysis, with each shifting the locus of the investigation to a different consequence: social, motivational, and interactional. I used different operationalizations of high performance (i.e., supervisor ratings and performance feedback). I examine different psychological and behavioral reactions based on performance differentiation (i.e., cognitive appraisal, social treatment, motivational states, and team processes). I also tested my predictions across several different task contexts using field, individual experiments, and team experiments that placed participants in real and simulated teams. Participants' incentives, domain-relevant expertise, and goals varied broadly between these contexts. Findings addressed many unanswered questions about the consequences resulting from higher performing members in workgroup, and also reveal other surprising effects and important questions that I am excited to pursue in future work. Collectively, results indicate that high performers have substantial, meaningful impact across variety of contexts—and not always as business leaders are likely to expect. Taken together, these findings suggest that relative performance in a collective work environment carries important implications for broader colleague interactions and motivations.

Essay 1 and 2 consider ways in which higher performers affect peer behaviors. Essay 1 revealed that higher performers trigger a paradoxical cognitive appraisal among

their peers. A pilot inquiry, a field study, and an experimental study in the context of teams indicated that high performers are considered simultaneously more beneficial and more threatening to work resources. Evidence suggested that peers are more likely to undermine higher performing colleagues due, in part, to their own appraisal of how the high performer will impact resources. Whether or not peers supported higher performers varied across our contexts: high performers received less *social* support in the field and more *task* support in lab teams. This may point to peers choosing to support higher performers when that support is more instrumental to collective success (i.e., task-related) rather than for the benefit of the higher performer (i.e., socio-emotional in nature). I examined whether more cooperative work environments could improve social treatment of higher performers, but results from two different contexts showed the opposite: higher performing coworkers were penalized more in more cooperative climates.

Building on Essay 1, Essay 2 also focused on peer behavior but turned the tables to answer a related question: how does the presence of a high performer affect peers motivation. Across two studies, I investigated how a high performer can shift the context and constrain peers' motivation to take initiative. Specifically, this inquiry considered how high performers can reduce motivation for peers who are naturally more proactive (i.e., high on disposition personal initiative). Findings converged to indicate that high performers may serve as social cues that strain peers' proactive motivation to contribute. These results carry potentially important implications for staffing and team composition. For instance, adding a high performer to a team could increase social loafing from other members—even proactive members who typically seek ways to contribute.

Shifting vantage points from individuals to teams, Essay 3 considers how performance disparity created by the presence of a high performer shapes team interactions. Evidence from a team experiment suggested that the presence of a high performer can reduce social motivation (i.e., social concerns among members). Further, performance disparity resulted in less team creativity (through task conflict) but more team idea implementation (through team coordination). Creativity and implementation, together, form the bedrock of innovation. Individually, each is necessary but insufficient to constitute innovation. Therefore, it is interesting that performance disparity seems to have contrasting effects on these core features of innovation. As formal differentiation in work teams is commonplace, it seems important to understand how to create team environments to fuel creativity. This seems especially true since results found that even informal differentiation (i.e., based on performance) reduced creative co-production. Conversely, findings indicated that flatter, self-managed teams in which there is relatively less differentiation on vertical differences, may have the upper hand in design of creative concepts; however, such groups may struggle to bring their ideas to fruition with efficiency and sufficient coordination.

As a collective, these essays highlight that high performers earn and pose consequences at work in ways that business and HR leaders may never expect. Findings begin to offer a more complete picture of unintended consequences of high performers. Certainly, there is benefit to hire, staff, and retain high performing employees. However, transplanting them into a workgroup or including them in a new team without taking relative performance difference into consideration may bare inadvertent effects—for the performer, for his/her peers, and for the team as a whole. Accordingly, to inform theory

and practice, it seems critical to consider the effects of relative differences in performance across unit-members. With the rise of more collective, relational models of work, it seems especially timely to advance understanding of such effects.

Future Research

Though this emerging program of research has revealed multiple consequences of high performers, there are many related and interesting questions that remain unanswered. For example, what types of environments or leader behaviors can improve social treatment of higher performers? Since cooperative climates seem to exacerbate unfavorable treatment of higher performers, are there other climates that can improve it? How are higher performers distinct from stars (i.e., those at the extreme positive end of the performance spectrum; cf. Groysberg, 2010)? The relationship between performance and social treatment may be curvilinear, which more data may help to inform. Recent evidence shows that individuals whose performance level falls at the tails of the spectrum are more likely to be treated poorly by colleagues (Janssen et al., 2014). Moreover, how does the relative performance between colleagues shape behavior? I reanalyzed data from Essay 1 at the dyadic level and results mirrored that at the individual-level, with the exception of the perceived benefit-social support link, which was non-significant. However, I am interested to explore this further and understand how the content and strength of the ties between two colleagues may shift as a function of their performance levels and performance differences.

In Essay 2, personal initiative and social inhibition substantially varied across contexts with and without a high performer but in a manner other than predicted. This has motivated me to further probe how high performers affect others' self-regulation. For

instance, based on social comparison theory (Festinger, 1954), we may expect that high performer creates an unfavorable comparison process for peers, triggering a prevention focus to minimize further shortcomings. In contrast, based on principals of goal-setting theory (cf. Locke & Latham 2002), a high performer may create a higher aspirational standard, which may motivate peers to strive for improved performance and focus on achievement rather than prevention. I pursue these questions in other research, guided by theories of regulatory focus (Higgins, 1997; 2000). Early evidence suggests that, individual propensity toward promotion versus prevention focus affects whether high performers fuel or hamper peer motivation.

In Essay 3, I contrasted the ends of the disparity spectrum (i.e., no disparity, high disparity) as an initial test. However, it would be interesting to examine linear and non-linear effects by modeling effects using the full spectrum of performance differentiation. In follow-up research, I am measuring performance differentiation as a continuous variable to understand the nuances of the disparity-team process relationship across the continuum. In addition, I am fascinated by team development interventions that may help teams with performance disparity to still dynamically co-create in divergent ways necessary for creativity. Namely, I am looking at ways in which salience of horizontal differences among members (i.e., variety) reduce the salience of vertical differences that results from performance differentiation (i.e., disparity).

In conclusion, examining high performers in the context of collective work, I sought to paint a more complete picture of performance consequences. The three essays of this dissertation take important steps forward in revealing largely ignored effects of individual high performers and underscore the value of being mindful of member

composition in collective work units. Evidence suggests that leaders pursuing of high performers should not infer their value in isolation, rather consider it as part of a broader, social system. If not, they may be doing themselves a disservice. I hope my developing research program continues to contribute insights and prompts further investigations that enrich understanding of consequences sparked by high performers.

Appendix A: Pilot Study Scenario – The Case of *Solutions Inc.* (Essay 1)

Background. You work at Solutions Inc., a mid-size consulting firm that focuses on data analytics. Your firm helps clients tackle business problems by researching the issues, collecting and analyzing data, recommending potential solutions to your clients, and helping clients implement their preferred solution. Solutions Inc. has been steadily growing because it has developed a good reputation. Reputation is important in this industry.

Your workgroup (i.e., you and your colleagues) work at the consulting firm headquarters while your company’s consultants work at different client sites to implement projects. Your workgroup at headquarters serves a key function: you’re responsible for coordinating projects, selling new work to clients, and attracting new clients. It is critical to keep clients happy and make sure projects are running efficiently and effectively.

Your Responsibilities, Rewards, and Performance. At Solutions Inc., each client project is managed individually by one member of your workgroup—unless a client project is complex or very large. Things can get hectic because you and your colleagues typically each oversee between 6-8 client projects at once. Good coordination is crucial. So, you and your colleagues try to share knowledge, exchange tips for how to serve clients, and help each other when things get busy.

The Director of the workgroup chooses who gets to manage each new client project. The Director selects based on who has availability and who may best serve the client and expand the account.

You think most colleagues in your workgroup view you as a competent employee. Your annual performance evaluations usually rate your performance as average within the group. You’ve had a good experience at Solutions Inc. and think there may be future opportunities to steadily advance your career here.

Colleagues. Two of your colleagues are quite different. Jordan is viewed as a higher performer and Taylor is viewed as a lower performer. In their annual performance evaluations, Jordan received above-average ratings while Taylor received below-average ratings. The objective components of their evaluations are below. This was what you expected based on observations. For example, Jordan wrote several business proposals that were excellent and also had several very well coordinated client projects. In contrast, Taylor wrote several business proposals that seemed insufficient and had several poorly coordinated client projects.

2012 Objective Performance Data

	Workgroup Average	Jordan	Taylor
Service Effectiveness Rating	8.2	9.1	7.3
Number of Successful Client Proposals	4	6	2



Appendix B: Performance Manipulation in Virtual Team Simulation for Study B (Essay 1)

High performer present

No high performer present

TASK 1 & 2 -- 88 points possible			TASK 1 & 2 -- 88 points possible		
Team member	Round 1 Score	Round 2 Score	Team member	Round 1 Score	Round 2 Score
\$(q://QID771/ChoiceTextEntryValue/3)	10	9	\$(q://QID771/ChoiceTextEntryValue/3)	6	5
\$(q://QID771/ChoiceTextEntryValue/4)	6	7	\$(q://QID771/ChoiceTextEntryValue/4)	6	7
\$(q://QID771/ChoiceTextEntryValue/5)	7	5	\$(q://QID771/ChoiceTextEntryValue/5)	7	5
\$(q://QID771/ChoiceTextEntryValue/6)	7	6	\$(q://QID771/ChoiceTextEntryValue/6)	7	6
Team Total: 58			Team Total: 50		

Appendix C: Study D (Essay 2) & Study E (Essay 3) Task Sheet

Team: _____

Team Participant Number:	Pre-survey Results:	Member Name:
_____	_____	_____
_____	_____	_____
_____	_____	_____

Task:

Your team has just been selected as one of the finalists to bid for a multi-million dollar construction contract. The project is a state-of-the-art research facility in Greenland that will house a high-tech firm named GEO. GEO's mission is to develop innovative solutions for exploring extreme environments, both on Earth and in space.

Your task is to design a research facility model with strong innovative design features that will win the contract bid. Success is crucial, because you've heard, through your professional network, that your chief competitor has a ground-breaking model that not only is likely to appeal to decision-makers at GEO, but also may revolutionize the field of environmental architecture. Coming up with a better innovative design to win the contract is therefore critical for your engineering firm's long-term success.

Many details about what top GEO executives envision for their future facility remain top secret. However, below are several of their goals for the facility that may help boost your score, if you incorporate them. You can also consider aspects of the environment in Greenland that may help your design.

Structural & Environmental Elements:

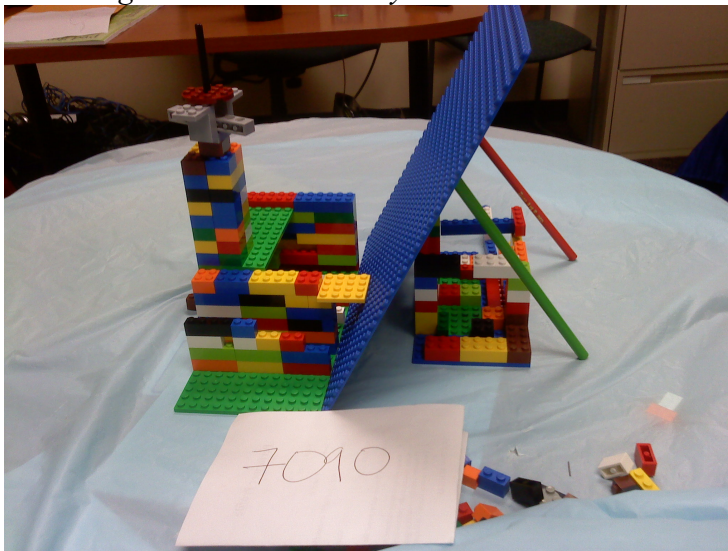
1. In past contracts, GEO Executives have usually preferred a non-standard architectural style.
2. One stream of GEO's research will focus on capturing data on the Northern Lights in the sky. The best photos will be those taken from higher off the ground. Consider this when determining the highest point(s) of your model (i.e., how high that floors or building features will go).
3. Revolutionary research will occur in the facility, so it is likely to receive media attention. It will make both your firm and CEO look good to have a facility that balances structural integrity with beauty (i.e., represents an architectural 'work of art').
4. Greenland does not enable a lot of coming and going. Therefore, the facility will have to be "all-in-one": researchers will both have to live and work in the facility. Please consider how to offer a balance of rooms that include living quarters, research labs, and a place to house machinery and generators.
5. It is always below freezing in this region of Greenland. Maximizing the number of external walls will facilitate geothermal heating systems within the facility.
6. The research facility will face strong Arctic winds, so using landscaping and/or structural elements to protect the research facility will help the site save energy.

Note: Please create a design that facilitates cross-sectional examination of your proposed architectural model (i.e., no roofing is required).

Engineering faculty will judge your design. Innovative designs will utilize materials creatively and incorporate novel and useful design elements. ***The more design elements you integrate in an innovative way, the more likely your model will win the construction bid (and end-of-semester cash prize--\$150 to the TOP TWO TEAMS between now and 4/10). Good luck!***

Appendix D: Study F (Essay 3) Representative Examples Innovative Structure Ratings

Rated High on Team Creativity



Rated High on Team Idea Implementation



Appendix E: Complete list of instruments, Study A

Variable & Reference	Items	Source
Job Performance (<i>Welbourne et al., 1998</i>)	Quality of work Efficiency of work Creativity of work Accomplishment of work goals Quantity of work	Managers
Prosocial Motives (<i>Grant, 2008; Rioux & Penner, 2001</i>)	Because it is important to me to do good for others through my work. Due to the fact that I care about benefiting others through my work. Because I want to help others through my work. To have positive impact on others through my work.	Self-reported (focal performer)
Perceived Benefit to Resources (<i>Spreitzer, 1996; Seibert, et al., 2001</i>)	...is someone who brings valuable resources to the group. ...is a beneficial source of resources to me, like customer contacts, ideas and supplies.	Peers
Perceived Threat to Resources (<i>Spreitzer, 1996; Seibert, et al., 2001</i>)	...is a source of competition for me in terms of customer access. ...uses more of his/her fair share of the groups resources, like supplies, space and time with the boss. ...is someone I need to compete with for resources.	Peers
Cooperative Climate (<i>Chatman & Flynn, 2001</i>)	It is important for us to maintain harmony within the salon. There is a lot of collaboration among stylists with tasks often viewed as collective responsibility. There is a high level of cooperation between stylists. There is a high level of sharing between stylists.	Self-reported (consensus model)
Social Support (<i>Barrera et al., 1981</i>)	given you some information to help you understand a situation you have been in. let you know that he/she will always be around if you need assistance. agreed that what you wanted to do was right. expressed interest and concern in your well-being. listened to you talk about your private feelings.	Self-reported (focal performer)
Social Undermining (<i>Duffy et al., 2002; 2006</i>)	insulted you. spread rumors about you. belittled you or your ideas. talked bad about you behind your back. criticized the way you handled things on the job in a way that was not helpful. gave you incorrect or misleading information about the job. let you know they did not like you or something about you.	Self-reported (focal performer)
Interpersonal Liking (<i>Ibarra, 1995</i>)	...is someone you consider to be a friend, or might choose to see socially outside of the salon?	Peers

Appendix F: Complete list of instruments, Study B

Variable & Reference	Items	Source
Task Performance	Manipulated	N/A
Perceived Benefit to Resources <i>(Spreitzer, 1996; Seibert, et al., 2001)</i>	...is a beneficial source of resources to me, like ideas and points. ...is someone who brings valuable resources to the whole team.	Peers
Perceived Threat to Resources <i>(Spreitzer, 1996; Seibert, et al., 2001)</i>	...is a source of competition for me in in team. ...is someone I need to compete with for resources. ...receives more of his/her fair share of the team's resources, like roles and feedback.	Peers
Cooperative Climate <i>(Chatman & Flynn, 2001)</i>	It is important for us to maintain harmony within the team. We emphasized collaboration in the team. Success was viewed as a collective, rather than individual, responsibility. I felt like there was a high level of cooperation between teammates. When working face to face, there was a high level of sharing within the team.	Peers
Familiarity	How well did you know this person prior to today's study?	Peers
Performance Manipulation Check	...performed better than most team members	Peers

Appendix G: Complete list of instruments, Study C

Variable & Reference	Items	Source
Personal Initiative <i>(Frese & Fay, 2001)</i>	I actively attack problems.	Self-reported
	Whenever something goes wrong, I search for a solution immediately.	
	Whenever there is a chance to get actively involved, I take it.	
	I take initiative immediately when others don't.	
	I use opportunities quickly in order to attain my goals.	
High Performer Present	Usually I do more than I am asked to do.	N/A
	I am particularly good at realizing ideas.	
	Manipulated	
	...Spoke up to encourage other members to get involved.	
	...Introduced new ideas or modifications in procedures.	
Voice <i>(Van Dyne & LePine, 1998)</i>	...Tried to bring about improved strategies for the team.	Peer-reported
	...Communicated his/her opinion about issues even if it was different or if others disagreed.	
	... Initiated better ways of doing your core tasks.	
	...Made changes to the way your core tasks were done	
Proactive Performance <i>(Griffin et al., 2007)</i>	... Came up with ideas to improve the way your tasks were done	Peer-reported

Appendix H: Complete list of instruments, Study D

Variable & Reference	Items	Source
Personal Initiative (<i>Frese & Fay, 2001</i>)	I actively attack problems.	Self-reported (pre-survey)
	Whenever something goes wrong, I search for a solution immediately.	
	Whenever there is a chance to get actively involved, I take it.	
	I take initiative immediately when others don't.	
	I use opportunities quickly in order to attain my goals.	
	Usually I do more than I am asked to do.	
High Performer Present	I am particularly good at realizing ideas.	N/A
	Manipulated	
State Self-Efficacy (<i>Tierney & Farmer, 2002;</i> <i>adapted</i>)	I felt confident in my ability to review resumes and provide recommendations.	Self-reported
	I was good at analyzing job applicant capabilities.	
	I had a knack for evaluating resumes.	
Felt Responsibility (<i>Morrison & Phelps, 1999;</i> <i>Hackman & Oldham, 1976;</i> <i>1980</i>)	I felt a personal sense of responsibility to contribute in this team.	Self-reported
	It was up to me to bring about improvement in our decision-making process.	
	I felt obligated to try to introduce new ideas and procedures where appropriate.	
	Correcting issues in this team was not really my responsibility. (reversed)	
	I felt little obligation to challenge ideas or processes in this team. (reversed)	
Social Inhibition (<i>Mattick & Clark, 1998;</i> <i>subscale</i>)	I was conscious of the way I presented myself in the team.	Self-reported
	I sometimes felt apprehensive to speak up in the team.	
	I was careful about my style of doing things in the team.	
	I considered what other teammates would think of me.	
	I felt hesitant to share my ideas.	
	I was worried about making a good impression in this team.	

Appendix I: Complete list of instruments, Study E

Variable & Reference	Items	Source
Performance Disparity	Manipulated	N/A
Social Concerns in Team <i>(Mattick & Clark, 1998; subscale)</i>	I have felt tense in mixing with members of the team.	Members (referent shift)
	I have been unsure about how to contribute to the team.	
	I have been worried about being ignored in the team.	
	I was nervous to express my ideas or suggest alternative to my teammates.	
	I felt very comfortable interacting with members in this team. (reversed)	
Team Task Conflict <i>(Jehn, 1995)</i>	I felt alert in mixing with members of the team.	Members (direct consensus)
	Members disagreed about opinions regarding the activities being done.	
	There was conflict about ideas in your team.	
	There were differences of opinion in the team.	
Team Coordination <i>(Lewis, 2005)</i>	There was conflict about the decisions made in the team.	Members (direct consensus)
	Our team worked together in a well-coordinated fashion.	
	Our team had very few misunderstandings about what to do.	
	Our team rarely needed to backtrack and start over.	
	We accomplished the task smoothly and efficiently.	
	There was little or no confusion about how we would accomplish our task.	

Table 1. Pilot Study (Essay 1) Summary Statistics.

	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10
1. Age	31.62	13.03	--									
2. Education	2.35	.78	-.27*	--								
3. Gender (Male = 1; Female = 2)	1.25	.44	.05	-.22	--							
4. Work Experience	10.68	11.62	.92**	-.14	-.06	--						
<i>High Performer Condition</i>												
5. Performance Rating	1.07	.31	-.14	.07	-.02	-.12	--					
6. Perceived Benefit	4.24	.70	.05	-.15	-.03	.17	.05	--				
7. Perceived Threat	3.40	.95	-.26*	.08	-.05	-.24*	-.00	.11	--			
<i>Low Performer Condition</i>												
8. Performance Rating	2.68	.56	-.17	-.05	.11	-.16	.45**	.29*	-.09	--		
9. Perceived Benefit	2.44	.76	.02	-.11	-.03	-.05	-.05	-.22	-.28*	-.21	--	
10. Perceived Threat	2.44	.78	-.05	-.06	.03	-.00	.23	-.10	-.09	-.21	-.03	--

* $p < .05$

** $p < .01$

Table 2. Study A (Essay 1) Means, Standard Deviations, and Correlations.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
<i>Individual - Level 1</i>													
1 Manager-rated performance	3.51	0.82	(.93)										
2 Relative manager-rated performance	0.00	0.54	.66**	--									
3 Age	28.07	6.65	.20**	.30**	--								
4 Tenure (in months)	76.24	58.63	.19**	.15**	.59**	--							
5 Education	2.10	0.42	-.13*	-.09	-.21**	-.16**	--						
6 Prosocial motives	4.07	0.56	.05	.11	.04	-.01	.05	(.91)					
7 Perceived benefit to resources	3.49	0.56	.17**	.20**	.05	.13*	.12*	.02	(.79)				
8 Perceived threat to resources	2.94	0.50	.09	.10	.17**	.13*	-.04	-.03	.15**	(.72)			
9 Social support	3.51	0.72	-.02	-.07	-.17**	-.13*	.05	.14*	.13*	-.20**	(.92)		
10 Social undermining	1.77	0.79	-.04	-.03	.07*	.08	-.02	-.18**	-.10*	.24**	-.28**	(.95)	
<i>Work Group - Level 2</i>													
11 Cooperative climate	3.92	0.38	-.03	.00	-.05	-.06	-.06	.24**	.29**	-.06	.22**	-.28**	(.81)

Note. Correlations displayed at the individual level. $N = 300$ individuals nested within 80 work groups (salons); workgroup-level means assigned down to individual group members; internal consistencies (alphas) display diagonally.

* $p < .05$

** $p < .01$

Table 3. Study A (Essay 1) Hierarchical Linear Regression Results

Variable	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b
	Benefit		Threat		Support		Undermining	
Intercept	3.48***	3.31***	2.92***	2.88***	3.50***	3.13***	1.77***	1.89***
Level 1 - Individual								
Relative performance	.21***	.22***	.09**	.11**	-.02	.00	-.09	-.10
Perceived benefit					-.27*	-.45***	-.16†	-.03
Perceived threat					-.26*	-.19*	.39***	.37***
Prosocial motives		-.06		-.02		.14*		-.13†
<i>Individual-Level Interaction</i>								
Relative performance x prosocial motives		-.04		-.16*		-.04		.06
Perceived benefit x prosocial motives						.11		.05
Perceived threat x prosocial motives						.10		-.32*
Level 2 - Workgroup								
Cooperative climate		.52***		-.04		.60**		-.37
Relative performance x cooperative climate		.06		-.02		.15		.12
<i>Cross-Level Interaction</i>								
Perceived benefit x cooperative climate						-.45**		.08
Perceived threat x cooperative climate						.60**		.08
Level 2 - Controls								
Average group performance		.09		.16		.12		-.04
Average group performance X cooperative climate		.01		-.02		.02		-.04
Pseudo R² ^a	.05	.17	.02	.05	.12	.18	.11	.22
$R_{(Level 1)}^{2a}$.06	.15	.02	.08	.15	.23	.07	.18
$R_{(Level 2)}^{2}$ for the intercept ^b	.03	.17	.02	.04	.01	.03	.30	.43
$R_{(Level 2)}^{2}$ for the slopes of perceived benefit and threat ^c						.06		.00

Note. N (Level 1) = 300; N (Level 2) = 80. Coefficient estimations are fixed effects gammas (γ) with robust standard errors. Hypothesized coefficients bolded.

^a Sum of total variance attributable to within and between variance components (Snijders & Bosker, 1999). Decomposed as:

^b $R_{(Level 1)}^{2a} = 1 - [(\sigma^2 \text{ of current model} + \tau_{00} \text{ of current model}) / (\sigma^2 \text{ of null model} + \tau_{00} \text{ of null})]$

^c $R_{(Level 2)}^{2}$ for the intercept = $(\tau_{00} \text{ of current model} / \text{average } n) + \sigma^2 \text{ of current model} / [(\tau_{00} \text{ of null model} / \text{average } n) + \sigma^2 \text{ of null model}]$

^d $R_{(Level 2)}^{2}$ for the slopes of perceived benefit and threat = τ of benefit/threat slope in model without predictor compared to τ of slope of benefit/threat in model with cooperative climate

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

Table 4. (Study A) Effects of Relative Performance on Peer Perception of Threat and Social Undermining at High and Low Levels of Performer Prosocial Motives

Moderator	Stage		Effect	
	First	Second	Direct	Indirect
Prosocial Motives				
Low (-1SD)	.20**	.56***	-.13	.11**
High (+1SD)	.03	.12*	-.07	.00
Differences	-.17*	-.44*	.06	-.11**

* $p < .05$

** $p < .01$

Table 5. Study A (Essay 1) Effects of Relative Performance on Peer Perception of Benefit and Social Support at High and Low Levels of Cooperative Climate

Moderator	Stage		Effect	
	First	Second	Direct	Indirect
Cooperative Climate				
Low (-1SD)	.19**	-.23	-.05	-.04
High (+1SD)	.24**	-.68**	.06	-.16**
Differences	.05	-.45**	.11	-.12**

* $p < .05$

** $p < .01$

Table 6. Study B (Essay 1) Means, Standard Deviations, and Correlations.

	M	SD	1	2	3	4	5	6	7	8	9
1 Performance Condition <i>(-1 = average performer; 1 = high performer)</i>	.03	1.00	--								
2 Perceived Threat	2.00	1.25	.24**	(.74)							
3 Perceived Benefit	3.32	1.44	.22**	.26**	(.87)						
4 Felt Envy	2.45	1.33	.31**	.40**	.07	(.76)					
5 Shared Information <i>(0 = shared with other peer; 1 = shared with focal performer)</i>	.39	.49	-.05**	-.01	-.14	-.03	--				
6 Selected for Opportunity <i>(0 = selected other peer; 1 = selected formal performer)</i>	.57	.50	-.53**	-.03	-.23**	-.13	-.12	--			
7 Response to Social Undermining	.34	1.31	.09	.11	-.09	.13	-.03	.20*	--		
8 Climate Condition <i>(-1 = low cooperative; 1 = high cooperative)</i>	.07	1.00	.00	.10	-.15*	-.01	.06	.12	.06	--	
9 Cooperative Climate Perceptions	4.85	1.27	-.15*	.02	.32**	.13*	-.14	.01	-.06	-.35*	(.87)

Note: $N = 254$ individuals

* $p < .05$

** $p < .01$ (two-tailed)

Table 7a. Study B (Essay 1) Hierarchical Regression Results.

Variable	Perceived Benefit			Perceived Threat			Response to Social Undermining					
	Model 1			Model 2			Model 6a			Model 6b		
	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β
Performance Condition (-1 = average performer; 1 = high performer)	.24**	(.07)	.21**	.23**	(.06)	.21**	.17*	(.10)	.14*	.14	(.10)	.11
Climate Condition (0 = low cooperative; 1 = high cooperative)	-.15*	(.07)	-.13*	.09	(.06)	.09	-.02	(.14)	-.01	-.05	(.19)	-.02
Perceived Benefit to Resources							-.24**	(.09)	-.22**	-.20*	(.09)	-.18*
Perceived Threat to Resources							.15*	(.09)	.12	.12	(.09)	.10
Cooperative Climate										-.05	(.08)	-.05
Cooperative Climate x Benefit												
Cooperative Climate x Threat										.14*	(.07)	.15*
	<i>R</i> ²	.06*		.05*			.05*			.08*		
	<i>F</i>	8.64		7.27			2.66			2.58		
	ΔR^2									.02*		
	<i>F for ΔR^2</i>									2.33		

Note: *N* = 254 individuals

* *p* < .05

** *p* < .01 (one-tailed)

Table 7b. Study B (Essay 1) Logistic Regression Results.

Variable	Social Support							
	Shared Information				Selected for Opportunity			
	Model 4a		Model 4b		Model 5a		Model 5b	
<i>b</i>	<i>s.e.</i>	<i>b</i>	<i>s.e.</i>	<i>b</i>	<i>s.e.</i>	<i>b</i>	<i>s.e.</i>	
Performance Condition (-1 = average performer; 1 = high performer)	.12	(.15)	.13	(.16)	1.23**	(.19)	1.33**	(.20)
Climate Condition (0 = low cooperative; 1 = high cooperative)	.05	(.30)	.05	(.30)	-.27	(.37)	-.22	(.36)
Perceived Benefit to Resources	.27*	(.15)	.28*	(.16)	.28*	(.17)	.22*	(.18)
Perceived Threat to Resources	-.09	(.15)	-.12	(.16)	-.31*	(.18)	-.30*	(.17)
Cooperative Climate			-.15	(.14)			.21	(.16)
Cooperative Climate x Benefit			-.09	(.10)			-.15	(.11)
Cooperative Climate x Threat								

Note: *N* = 254 individuals

* *p* < .05

** *p* < .01 (one-tailed)

Table 8. Relative Performance on Social Undermining Responses at High and Low Levels of Cooperative Climate.

Moderating Variable	Stage		Effect		
	<i>First</i>	<i>Second</i>	<i>Direct</i>	<i>Indirect</i>	<i>Total</i>
<i>Cooperative Climate</i>					
High	.27**	.26*	.01	.07**	.08
Low	.19**	-.14	.13	-.03	.11
Differences	.08	.41*	-.13	.10	-.03

Note: N = 254 individuals

* $p > .05$

** $p > .01$ (two-tailed)

Table 9. Study C (Essay 2) Means, Standard Deviations, and Correlations.

	<i>M</i>	<i>SD</i>	1	2	3	4
Performance Disparity						
1 (<i>0 = no performance disparity; 1 = performer disparity</i>)	.46	.50	--			
2 Personal Initiative (<i>self-report</i>)	3.76	.49	.15	(.79)		
3 Observed Voice Behavior (<i>peer-report</i>)	4.09	.69	-.12	-.04	(.85)	
4 Observed Proactive Performance (<i>peer-report</i>)	3.86	.74	-.19	-.05	.83**	(.88)

Note: $N = 72$ individuals; internal consistencies appear on the diagonal (Cronbach's alpha)

* $p > .05$ (two-tailed)

Table 10. Study C (Essay 2) Moderated Regression Results.

Variable	Voice						Proactive Performance					
	Model 1a			Model 1b			Model 2a			Model 2b		
	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β
Personal Initiative	-.06	(.17)	-.04	.33	(.20)	.24	-.08	(.18)	-.05	.28	(.22)	.19
High Performer Present (0 = control; 1 = experimental)				3.45*	(1.26)	2.52*				2.85*	(1.37)	1.93*
Initiative x High Performer Condition				-.95**	(.33)	-2.71**				-.82*	(.36)	-2.18*
	R^2	.00		.13*			.00			.11*		
	<i>F</i>	.13		3.24			.18			2.68		
	ΔR^2			.12*						.10		
	<i>F for ΔR^2</i>			4.79						3.93		

Note: *N* = 72 peers

* *p* > .05

** *p* > .01 (one-tailed)

Table 11. Study E (Essay 2) Means, Standard Deviations, and Correlations.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
Performance Disparity									
1 (<i>0 = no performance disparity; 1 = performer disparity</i>)	.51	.50	--						
2 Personal Initiative	3.86	.54	.04	(.80)					
3 Social Inhibition	3.60	1.30	.03	-.06	(.83)				
4 Creative Self-Efficacy	4.68	1.10	.10	.27**	.05	(.88)			
5 Felt Responsibility	4.04	1.22	.03	.13	.50**	.40**	(.76)		
6 Length of Recommendation	50.62	33.99	-.02	-.04	.08	.17*	.12	--	
7 Rating of Quality of Proactive Recommendations	4.14	1.67	-.04	-.02	.19**	.22**	.25**	.71**	--

Note: N = 210 individuals; internal consistencies appear on the diagonal (Cronbach's alpha)

* *p* > .05

** *p* > .01 (two-tailed)

Table 12. Study D (Essay 2) Moderated Regression Results.

Variable	Self-Efficacy			Felt Responsibility			Social Inhibition			Proactive Performance														
	Model 1a		Model 1b	Model 2a		Model 2b	Model 3a		Model 3b	Model 4 (Length)			Model 5 (Quality Rating)											
	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β						
Personal Initiative	.29**	(.07)	.27**	.44*	(.10)	.40*	.16*	(.09)	.13*	.29*	(.12)	.24*	-.08	(.09)	-.06	.11	(.12)	.09	.91	(3.3)	.03	.02	(.16)	.01
High Performer Present (0 = control; 1 = experimental)				.21	(.15)	.09				.07	(.17)	.03				.08	(.18)	.03	-2.0	(4.7)	-.03	-.15	(.23)	-.04
Initiative x High Performer Condition				-.32*	(.15)	-.20*				-.28*	(.17)	-.16*				-.42*	(.18)	-.22*	-7.3	(4.7)	-.15	-.26	(.23)	-.11
Proactive Motivation																			2.4*	(1.3)	.14*	.15**	(.06)	.17**
	<i>R</i> ²	.07**		.10*			.01*			.02*			.00			.03*			.03*			.04*		
	<i>F</i>	15.83		7.64			3.78			2.26			.81			2.15			1.71			1.94		
	ΔR^2			.03*			.01*			.01*						.03*								
	<i>F for</i> ΔR^2			3.36						1.49						2.81								

Note: *N* = 210 individuals
 * *p* > .05
 ** *p* > .01 (one-tailed)

Table 13. Study D (Essay 2) Bias-Corrected Analysis of Simple Effects Across Condition on Proactive Performance.

Mechanism & Moderating Condition	Stage		Effect		
	<i>First</i>	<i>Second</i>	<i>Direct</i>	<i>Indirect</i>	<i>Total</i>
<i>Social Inhibition</i>					
High Performer Present					
No	.21	.22	.16	.05	.21
Yes	-.56**	.23*	-.20	-.13*	-.33
Differences	-.77**	.01	-.36	-.18**	-.54
<i>Creative Self-Efficacy</i>					
High Performer Present					
No	.81**	.44**	-.15	.36**	.21
Yes	.22	.30*	-.40	.07	-.33
Differences	-.59**	-.14	-.25	-.29*	-.54
<i>Felt Responsibility</i>					
High Performer Present					
No	.54**	.37**	.01	.20**	.21
Yes	.02	.33**	-.34	.01	-.33
Differences	-.52	-.04	-.35	-.19	-.54

Note: $N = 210$ individuals

* $p > .05$

** $p > .01$ (two-tailed)

Table 14. Study E (Essay 3) Means, Standard Deviations, and Correlations.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
Performance Disparity								
1 (<i>0 = no performance disparity; 1 = performer disparity</i>)	.48	.50	--					
2 Social Concern in Teams	1.92	.36	-.21	(.87)				
3 Team Task Conflict (<i>divergent participation</i>)	2.24	.50	-.36**	.20	(.79)			
4 Team Coordination (<i>convergent participation</i>)	4.01	.46	.20	-.54**	-.31*	(.81)		
5 Team Creativity	1.11	.65	-.07	-.13	.31*	.01	--	
6 Team Idea Implementation	1.30	1.09	.14	.03	.18	.16	.32**	--

Note: N = 68 teams; internal consistencies display on the diagonal (Cronbach's alpha)

* $p > .05$

** $p > .01$ (two-tailed)

Table 15. Study E (Essay 3) Hierarchical Linear Regression Results.

Variable	Social Concern in Teams			Team Task Conflict			Team Coordination			Team Creativity			Team Idea Implementation								
	Model 1			Model 2a			Model 2b			Model 3a			Model 3b			Model 4			Model 5		
	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β	<i>b</i>	<i>s.e.</i>	β
Performance Disparity (0 = no performance disparity; 1 = performer disparity)	-.15*	(.09)	-.21*	-.36**	(.11)	-.36**	-.33**	(.12)	-.33**	.19*	(.11)	.20*	.09	(.10)	.09	.02	(.16)	.02	.51*	(.28)	.23*
Social Concern in Teams						.18	(.16)	.13				-.66*	(.14)	-.52*	-.32	(.25)	-.18	.56	(.42)	.18	
Team Task Conflict (divergent participation)															.46*	(.17)	.36*	.70*	(.28)	.32*	
Team Coordination (convergent participation)															.04	(.20)	.03	.72*	(.34)	.31*	
R^2	.04*			.13*			.14*			.04*			.30**			.13*			.14*		
F	3.07			9.83			5.17			2.83			13.9			2.37			2.87		
ΔR^2							.01						.26**								
F for ΔR^2							.70						24.00								

Note: $N = 68$ teams

* $p > .05$

** $p > .01$ (one-tailed)

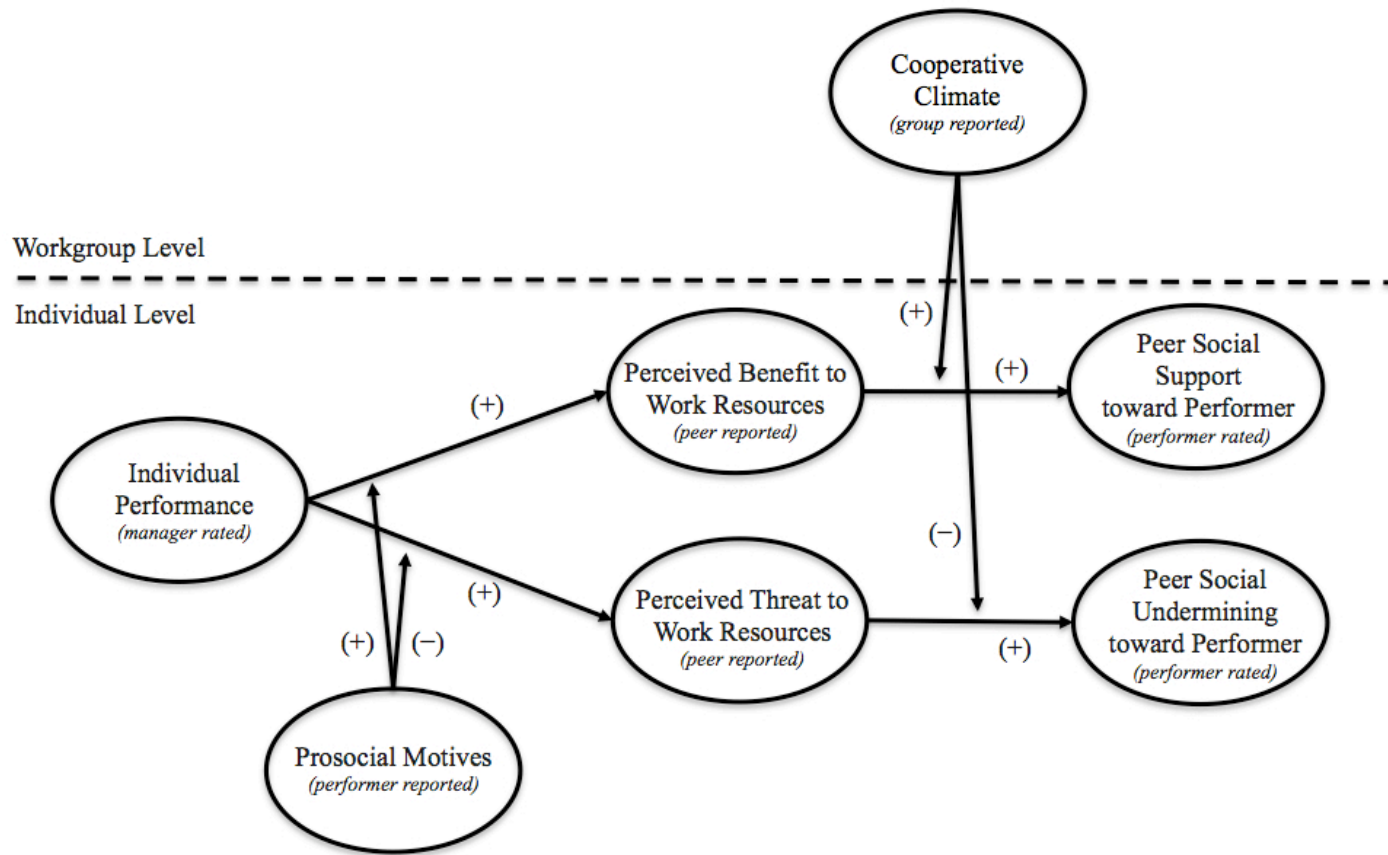
Table 16. Key Concepts and Definitions.

Essay 1	
Concept	Definition
Individual Performance	Degree of proficiency and quality in employees' accomplishment of tasks specific to their role and contextually-relevant contributions (Campbell, McCloy, Oppler, & Sager, 1993; Griffin et al., 2007)
Perceived Threat to Work Resources	Evaluation that a colleague puts at risk your access to social and material resources (adapted from Spreitzer, 1996)
Perceived Benefit to Work Resources	Evaluation that a colleague augments and facilitates your access to social and material resources at work (adapted from Spreitzer, 1996)
Social Support	Intentional behaviors extended to others for fostering positive interpersonal relationships (Duffy, Ganster, & Pagon, 2002)
Social Undermining	Intentional efforts to impede others' ability to establish and sustain effective interpersonal relationships, to achieve work success, and to maintain a strong reputation (Duffy et al., 2002)
Prosocial Motives	Individual predisposition to benefit, protect, and promote the welfare of others (Grant, 2008; Rioux & Penner, 2001; Schwartz & Bardi, 2001)
Workgroup Cooperative Climate	Shared perceptions among workgroup members that collective objectives and mutual interests should be pursued (Chatman & Flynn, 2001)

Essay 2	
Concept	Definition
Personal Initiative	Akin to proactive disposition, personal initiative reflects individuals' natural propensity toward behaviors that are self-starting, proactive, and persistent in overcoming barriers (Frese & Fey, 2001)
Proactive Motivation	Employees' beliefs of their interests and capacity to prompt change in their work (Parker, Bindl, & Strauss, 2010)
Analytic Self-efficacy	Employees' believe in their capacity to perform well in an analytical task (adapted from creative self efficacy; Tierney & Farmer, 2002)
Felt Responsibility	Employees' view of their personal accountability in a task. (Hackman & Oldham, 1976; 1980; Morrison & Phelps, 1999)
Social Inhibition	Employees' state of feeling reserved, lack of comfort, and self-consciousness, which prevents behaving in a relaxed, natural way. (Daly & Stafford, 1994; Mattick & Clark, 1998).
Proactive Performance	Individual behavior that initiates change, is self-starting, and future oriented toward a better way of doing things (Griffin et al., 2007)
Status	The amount of respect, influence, and prominence individuals have in the eyes of others (Anderson et al. 2001, Flynn 2003), which signals an important positional element in the social structure (Washington & Zajac, 2005)

Essay 3	
Concept	Definition
Performance Disparity	The extent to which the quality of performance attributed to individuals in a group is dispersed, capturing the pattern and distribution of group member performance differences.
Social Hierarchy	Implicit ranking of individuals with respect to their social value (Bales, 1958; Magee & Galinsky, 2008)
Social concern in teams	A feeling among members of the team of increased social ambiguity and social anxiety, activated social attention to the social context (Mattick & Clark, 1998).
Team Divergent Participation	Exchange of differing information, alternative ideas, opposing views, and differing insights across members of a team
Task Conflict	Member disagreement over ideas and opinions related to accomplishing the group's task (Jehn, 1995; 1997)
Team Convergent participation	Efficient exchange of inputs and outputs, harmonization and coalescence of efforts, and efficient synchronization of efforts and ideas.
Coordination	Teams' orchestration of the "sequence and timing of interdependent actions" (Mark, Mathieu, & Zaccaro, 2001: 363).
Team Innovation	Teams' (1) development of novel, useful ideas and (2) successful implementation of those ideas into tangible products and services (West & Farr, 1990).
Team Creativity	Production of novel and useful ideas concerning products, services, processes, and procedures by a team of employees working together (Shin & Zhou, 2007: 1715)
Idea Implementation	The extent to which teams succeed in converting ideas and plans in to tangible reality, which involves navigation of a socio-political process (adapted from Baer, 2012)

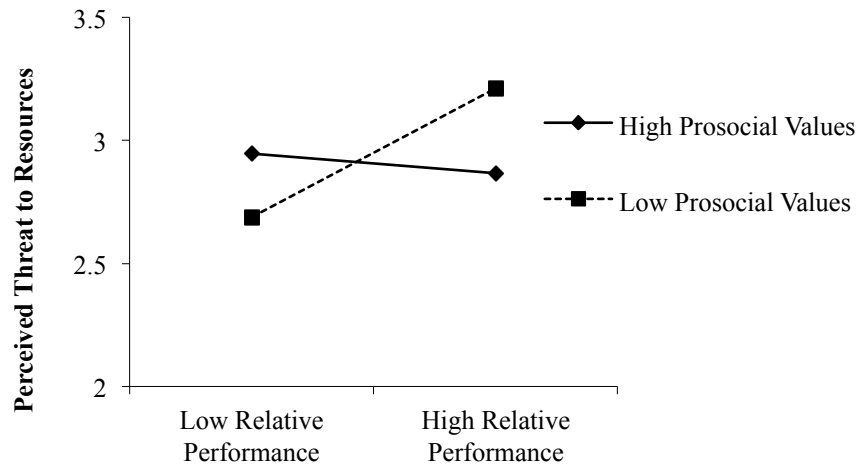
Figure 1. Theoretical Model (Essay 1) – Social Consequences for High Performers



Note: Italics indicate source of rating in Study A

Figure 2. Study A Simple Slopes of Interactions (Essay 1)

Level 1 Interaction



Cross-level Interaction

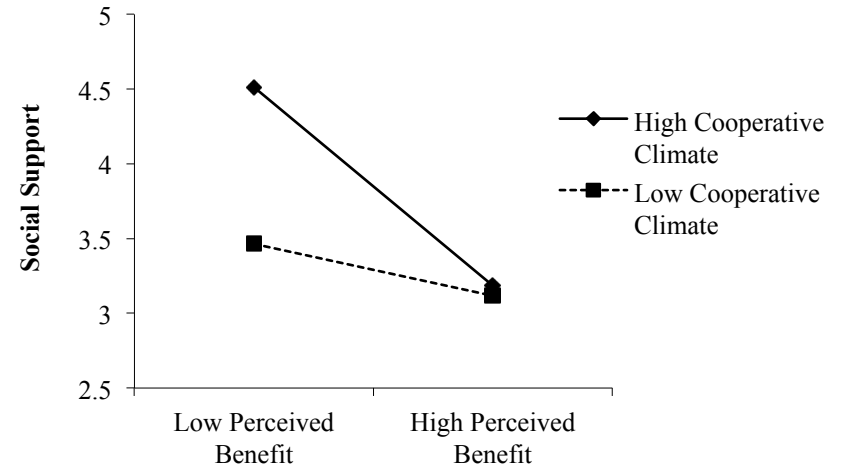


Figure 3. Study B Simple Slopes of Interaction (Essay 1)

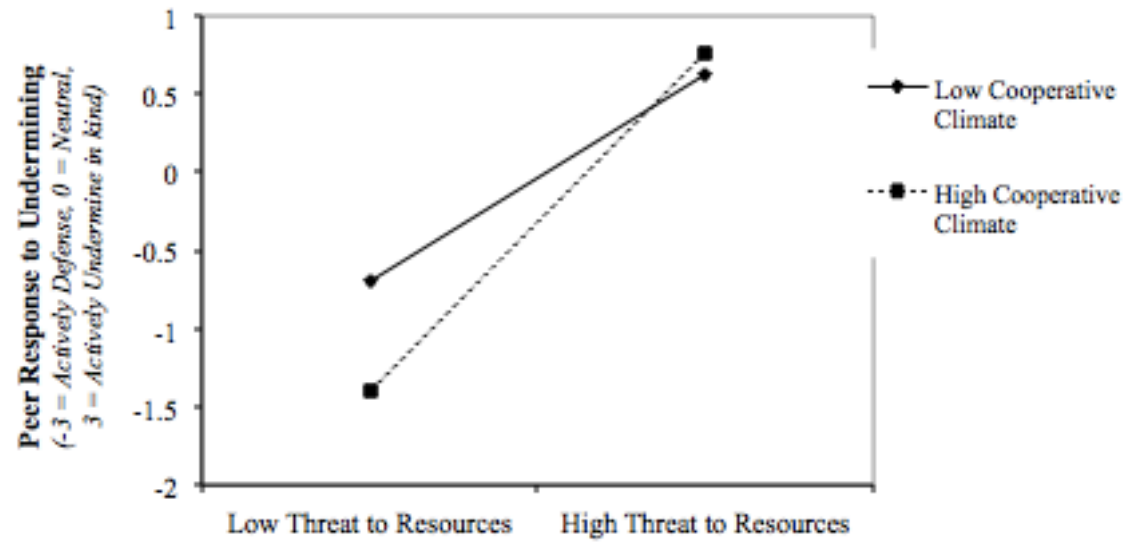


Figure 3. Theoretical Model (Essay 2) – Moderating Effects of High Performers on Peer Proactivity

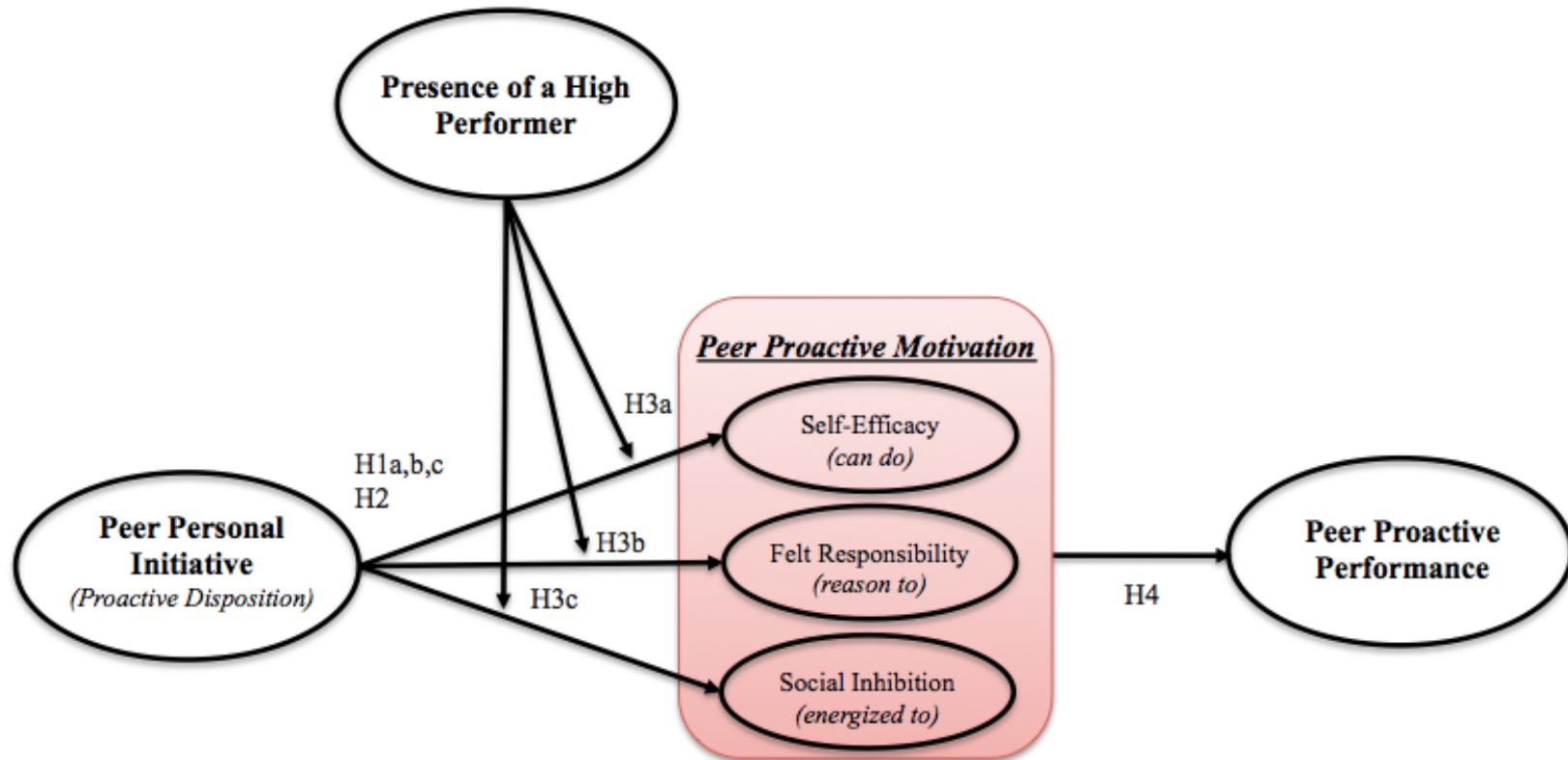


Figure 5. Study C Simple Slopes of Interactions (Essay 2)

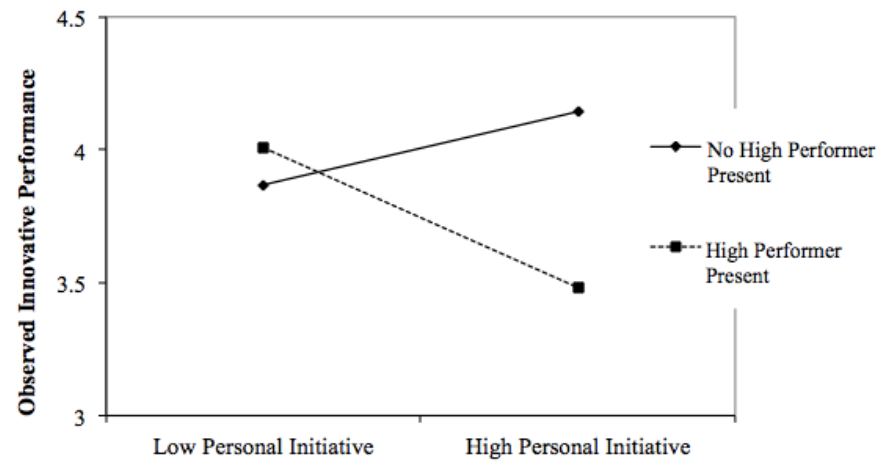
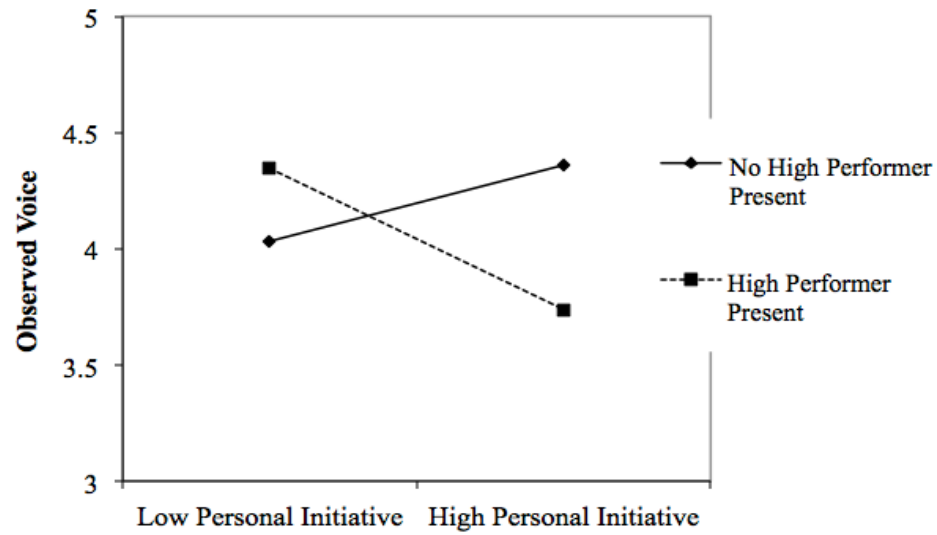


Figure 6. Study D Simple Slopes of Interaction (Essay 2)

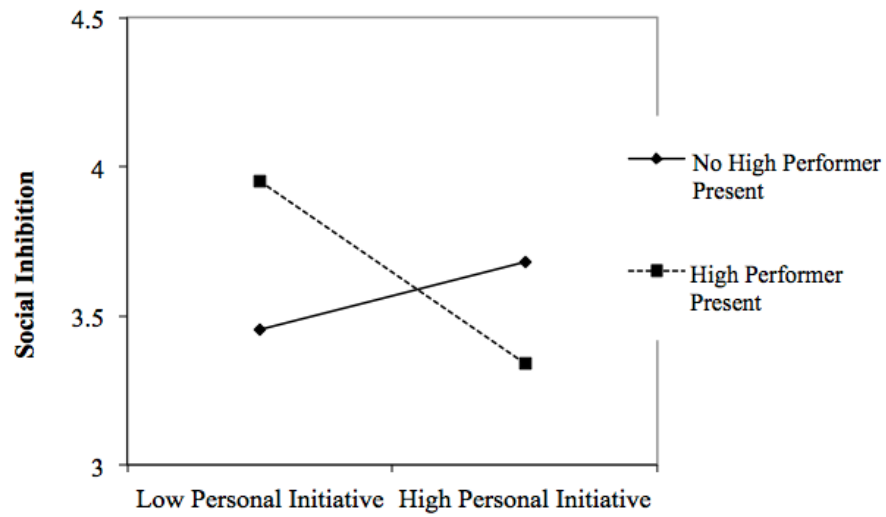
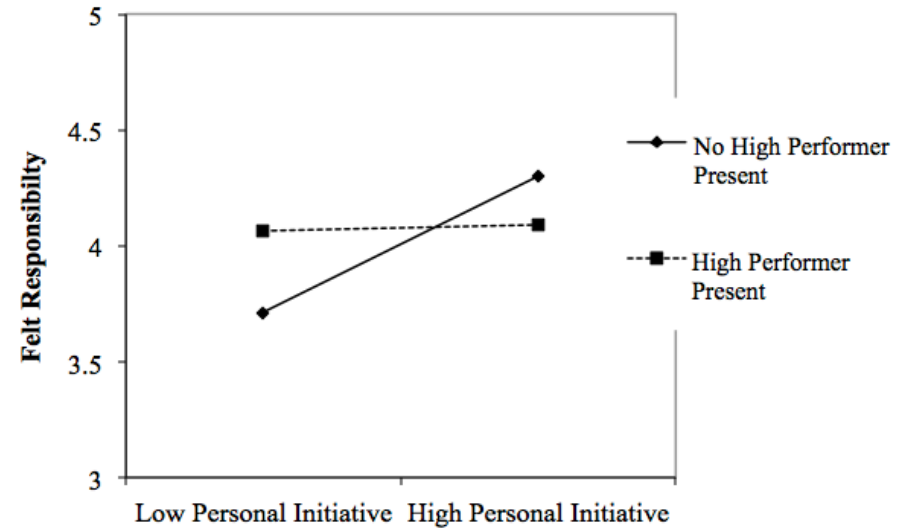
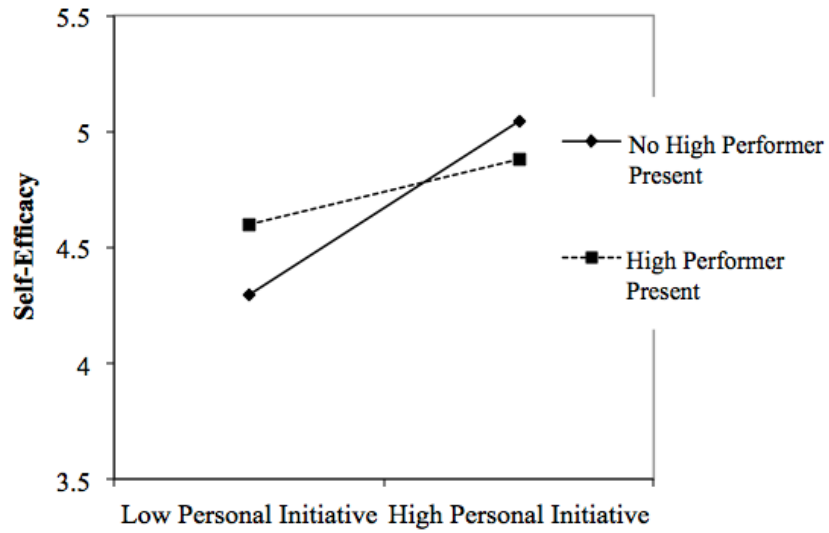
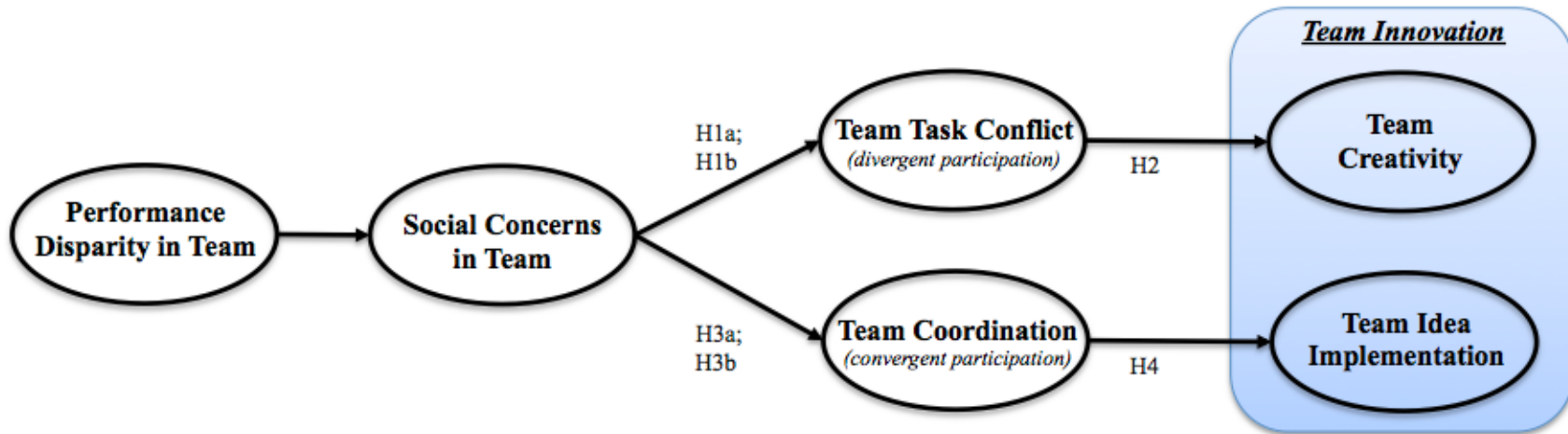


Figure 7. Theoretical Model (Essay 3) - Effects of Performance Disparity on Team Innovation



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