STATUS, RELATIVELY SPEAKING: EXTENDING THE ORGANIZATIONAL FOCUS ON STATUS AND STATUS INEQUALITY

by

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Abstract

This dissertation explores the role of status and status hierarchies in organizations, with considerable attention devoted to status-based health disparities. Manuscript 1 extends the current work stress literature by proposing a dynamic model relating individual-level socio-economic status (SES) to workplace stressors, psychological resources, and health. The model is tested using three-wave longitudinal data gathered across four years from employed Canadians. The results show an escalating relationship between personal control and work stressors, which indirectly links SES to physical health outcomes.

The second study of the dissertation elaborates on the definition of status, acknowledging and embracing its relational nature. In doing so, Manuscript 2 advances Manuscript 1 in numerous ways: (1) it conceptualizes status at the team-level of analysis by introducing the construct of status inequality, or the degree to which status is dispersed within teams; (2) it shifts focus from macro indicators of SES to organizational indicators of status within small, face-to-face teams, asking whether status in these teams influences health; (3) it explores performance-related outcomes in addition to health outcomes at both the individual- and team-level of analysis. Archival data from National Basketball Association players and teams were obtained to test the hypotheses set forth in Manuscript 2. The results of the study suggest that both status and status inequality (and their interaction) are related to the focal individual- and team-level outcomes.
The final chapter comprising this dissertation resides largely at the team-level of analysis. Manuscript 3 is a conceptual exploration into the mechanisms that relate status inequality to team-level health and performance, proposing that status inequality influences social cognition, from which emerges a team’s social structure. Furthermore, it places boundary conditions on the effects of status inequality by arguing that shared cultural values will determine how status inequality is perceived and enacted. The dissertation closes with a general discussion of the studies and recommendations for future research.
Co-Authorship and Manuscript Notes

Julian Barling is gratefully acknowledged as a co-author on each of the three manuscripts: “Disentangling the Indirect Links between SES and Health: The Dynamic Roles of Work Stressors and Personal Control”, “Beyond Status: Status Inequality and Performance, Health, and Thriving in Teams”, and “A Relational Model of Status Inequality in Teams”.

Manuscript 1, “Disentangling the Indirect Links between SES and Health: The Dynamic Roles of Work Stressors and Personal Control”, has been resubmitted for review at the Journal of Applied Psychology.
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Statement of Originality

I hereby certify that all of the work described within this thesis is the original work of the author. Any published (or unpublished) ideas and/or techniques from the work of others are fully acknowledged in accordance with the standard referencing practices.

(Amy Christie)

(November, 2008)
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Chapter 1

Introduction

From the teenager seeking respect on the streets to the executive jockeying for status among the board members, it is impressive how concerned people are with relations of social evaluation, esteem, and influence (Ridgeway & Erickson, 2000, 579). Status orders are a natural and pervasive component of social functioning. Status structures tend to emerge quickly, sustain themselves across time, and seem to characterize all types of social groups (e.g. Barkow, 1989). Broadly defined, status is an individual’s ranking relative to others based on attributes such as prestige, respect, and prominence, and is associated with a host of social advantages (e.g., Anderson, Srivastava, Beer, Sparato, & Chatman, 2006; Anderson, John, Keltner, & Kring, 2001; Berger, Cohen, & Zelditch, 1972; Huberman, Loch, Önçüler, 2004; Perretti & Negro, 2008; Ridgeway & Walker, 1995; Thye, 2000; Washington & Zajac, 2005; Westphal & Khanna, 2003). Evolutionary anthropology reveals that status organizing processes serve an adaptive function; they have evolved over millions of years to facilitate efficient resource allocation within groups, whilst maintaining group cooperation in response to external threats (Barkow, 1989). Social psychologists argue that status is a fundamental source of social motivation, tightly linked to self-esteem and self-worth (e.g., Anderson et al., 2006; Barrick, Stewart, & Piotrowski, 2002; Berdahl, 2007; Buss, 1999), as suggested
by Ridgeway and Erickson’s (2000) quote above. Indeed, status is said to have intrinsic value above and beyond its material or social benefits (Huberman et al., 2004).

Discussions of status rarely exclude an acknowledgement of organizational factors. Occupational prestige, such as distinctions between managers and subordinates or between white- and blue-collar occupations, is a defining component of socio-economic status (SES; e.g., Krieger, Williams, & Moss, 1997). The nuances of status differences also emerge within organizations. Traditionally, more prestigious roles are clearly marked by symbols that range from job titles to office attire to perks and privileges, and are associated with increasing rights to power and decision-making within the organization (e.g., Pfeffer, 1998). These influences permeate organizational functioning; remarkably, even skyscrapers have been designed and constructed to maximize the quantity of corner offices that so often denote social status (e.g., Three First National Plaza, Chicago). Baron and Pfeffer (1994) suggest that “organizations affect inequality by influencing how jobs are defined, how rewards are attached to positions, how people are matched to these jobs, and how workers determine whether they have been treated fairly” (p.191).

The organizational literature surrounding issues of status is sparse despite the premise that these topics are clearly intertwined, and given the ubiquity of status organizing processes in organizations, which has prompted calls for more research about status in the field (Pearce, 2001; Ravlin & Thomas, 2005). Accordingly, in recent years, diverse areas of organizational research have increasingly integrated status perspectives.
into their frameworks, including theories of organizational deviance (Aquino, Galperin, & Bennett, 2004; Aquino, Tripp, & Bies, 2001), harassment, (Berdahl, 2007), collaboration (Sheldon, Thomas-Hunt, & Proell, 2006), influence patterns in groups (Bunderson, 2003), team design (Perretti & Negro, 2006), diversity (Chatman & O’Reilly, 2004, Joshi, Liao, & Jackson, 2006, Van der Vegt, Van de Vliert, & Huang, 2005), and occupational health psychology (e.g., Marmot, 2004).

The purpose of the present dissertation is to extend this growing body of literature, particularly in relation to the conceptualization of status and status structures, and their influences on employee health and well-being. This introductory chapter provides a framework for interpreting the remainder of the dissertation, which includes two empirical studies, a conceptual manuscript, and a general discussion. Figure 1-1 provides an overview of the dissertation.
MANUSCRIPT 1: Can dynamic workplace factors explain the relationship between status and health?

MANUSCRIPT 2: How does team status inequality relate to health and performance? Does status moderate this relationship at the individual-level?

MANUSCRIPT 3: An exploration of the mechanisms that relate status inequality to team health and performance, and the moderating properties of shared cultural values.
The Benefits of Status

The universality of status contests derives from the many benefits of occupying high status positions. Individuals with higher status typically possess more power and influence over others, and are afforded disproportionate attention in groups (e.g., Belliveau, O’Reilly, Wade, 1996; Driskell & Mullen, 1990). For example, even when individuals are erroneously labeled as high status group members, they are still evaluated more favorably by others irrespective of their contribution to group tasks (Weisband, Schneider, & Connolly, 1995). Status is associated with performance expectations, and thus individuals with lower status tend to defer to those with higher status who are presumed to be more competent (Berger, Rosenholtz, & Zelditch, 1980). Consequently, expectations of performance may produce anticipated performance differences between high and low status individuals, reinforcing these status distinctions (Gerber, 1996).

Resources are also more abundant for those in higher status positions. In fact, these positions are often defined by access to substantive luxuries, including wealth and opportunity (Adler, Boyce, Chesney, Cohen, Folkman, Kahn, & Syme, 1994). Psychological resources, such as a sense of personal mastery and optimism, and social resources, such as superior social affiliations and support, are more common to those individuals with higher status (Gallo & Matthews, 2003; Gallo, Bogart, Vranceanu, & Matthews, 2005). The flow of social attention toward high status individuals from both those with high and low status leaves low status individuals more vulnerable to social isolation (Perretti & Negro, 2006; Wilkinson, 2005). Acknowledging these advantages, it
is not surprising that individuals are intensely motivated to occupy relatively higher positions in a status hierarchy (Frank, 1999).

Of principal focus in this dissertation are the accumulated findings that status predicts perhaps one of the most vital human conditions: health and longevity (often referred to as “the social gradient in health”; for a review see Marmot, 2004, p.2). Occupational health psychologists have asked how workplace factors partially account for the relationship between status and employee health and well-being, predominantly exploring the relationship between SES, the psychosocial work environment, and health outcomes. SES is a specific conceptualization of status that is used to understand status rankings on a macro or societal scale, and includes both resource and prestige components (Krieger et al., 1997). Typically, three indicators define SES, namely income, educational attainment, and occupational prestige, all of which capture social rankings based on the material resource and prestige dimensions of SES (e.g., Gallo & Matthews, 2003; Kristenson, Eriksen, Sluiter, Starke, & Ursin, 2004). A substantive body of empirical research shows that lower SES predicts less favorable working conditions, which in turn are associated with poorer health (e.g., Matthews et al., 2000; Marmot & Shipley, 1996; Siegrist & Marmot, 2004; Stansfeld, Head, & Marmot, 1998; Vahtera, Virtanen, & Pentti, 1999). For example, individuals with lower SES perceive their work as less fair (van Prooijen, van den Bos, & Wilke, 2002) and report more chronic workplace stressors (e.g., Warren, Hoonakker, Carayon, & Brand, 2004), both of which
negatively affect health (e.g., Kivimäki, Ferrie, Head, Shipley, Vahtera, & Marmot, 2004; Kristenson et al., 2004).

**Manuscript 1**

The first study of my dissertation extends this literature linking SES to stressful working conditions and health by hypothesizing a dynamic relationship between work stressors and psychological resources, both of which directly relate to SES. Individuals with lower SES tend to perceive more work-related stressors and also possess fewer stress-mitigating psychological resources. Dynamic theories of the stress process suggest that individuals who perceive their work as more stressful should subsequently deplete their reserve of psychological resources, and those who have fewer psychological resources should be more likely to perceive on-going work stressors (Gallo & Mathews, 2003; Hobfoll, 1989, 2001; Karasek & Theorell, 1990). The result is a compounding relationship between perceived work stressors and psychological resources across time, where initial advantages fuel future advantages and vice versa. Argued in the study described Manuscript 1 is that this escalation of stressors and resources in related to physical health outcomes over a four-year period, thus providing an explanation for the persistent nature of SES-based health disparities.

**Extending the Organizational Perspective of Status and Health**

*What does a billionaire need a second billion for? Why, to be of higher rank than a fellow billionaire who only has a single billion (Barkow, 1989, p. 196).*
The social gradient in health provides one meaningful way of understanding status-based health differentials. However, SES can predict very little about how status influences health within smaller or face-to-face groups of individuals who may not differ significantly on SES. As illustrated above by Barkow (1989), even for billionaires whose social standing outranks almost all of society, relative status differences are meaningful. Recall that status is defined as an individual’s position or rank-order in a social system based on prestige, prominence, and respect, and thus is a relational construct; an individual’s status is socially constructed relative to that of others (Washington & Zajac, 2005). Embracing this relational definition of status guides the remainder of my dissertation.

Notable is that relative differences are often lost when status is conceptualized using indicators of SES. For example, Marmot, Shipley, and Rose’s (1984) classic study of British civil servants established a social gradient across four employment grades, from senior administrators to unskilled workers. Doing so provides a macro framework for relating status to health across distinct SES positions, but ignores status differences within employment grades. This shortcoming is significant because evidence suggests that status distinctions emerge both in large social systems such as society as a whole, and also in much smaller social systems such as interpersonal groups (e.g., Berger et al.1980).

Perhaps the sociological literature on status has been most instructive about the importance of relative status differences no matter how small the social system. Evidence
suggests that unique status hierarchies emerge in small interactive groups, such as teams in organizations, and that status may be conferred in these groups based on any number of relevant status characteristics (e.g., Berger et al., 1980). While these status differences may reflect differences in SES (e.g., individuals with higher levels of education earn higher status), this need not be the case. Each individual’s status is constructed relative to the rest of the group based on subjectively-agreed upon observable status cues or symbols (e.g., gender, age, salary, experience, clothing, etc.), which are reinforced through social interaction (Berger et al., 1980; Sauder, 2005). Thus, individuals are prompted to make sense of and compare their status to others within their group.

While such within-group differences can seem trivial when compared to overall societal distributions of SES, relative standing across meaningful social comparisons is surprisingly important to individuals, so much so that individuals are willing to forgo their absolute standing to enhance their relative standing compared to salient others (see Frank 1999 for a review). Karl Marx may have described this phenomenon best when he said “A house may be large or small; as long as the surrounding houses are equally small, it satisfies all social demands for a dwelling. But if a palace rises beside the little house, the little house shrinks into a hut” (in Frank, 1999, p.122).

As a result of these “social demands”, relative status positions are salient social motivators. Take the following simple yet classic empirical example:

Given the choice between two hypothetical worlds, one in which [the individual] would earn $100,000 a year in perpetuity while others earn only $90,000, and another in which [the individual] would earn $110,000 while others earned $200,000…from
survey evidence, we know that a substantial proportion of people confronted with such a choice would opt for the first world (Frank, 1999, p.129).

Although the individual would have an additional $10,000 per year and all incomes would be higher in the second world, relative position motivates some individuals to choose the first world.

Thus, because status hierarchies emerge in groups regardless of absolute differences in SES and relative differences within these groups are meaningful, a complete understanding of the relationship between status and health begs the question: Do status-based health disparities also emerge within small groups?

Furthermore, two additional issues extend from conceptualizing relative status differences within small groups. First, if within-group health differentials exist among individuals with similar SES, then it is unlikely that work stressors or variations in job characteristics can fully explain these discrepancies. Consider the two billionaires described by Barkow; both are likely to encounter similar life and work events.

Accordingly, of interest is not only if status in small groups influences to health, but also why and how this relationship occurs. As explored in Manuscript 2, drawing on the conceptualization of status as a relational construct can provide insight into these questions.

Second, because status is a position in ordered social system, status is inseparable from the distribution from which it is created. Of consequence may be an individual’s position in a status structure, properties of the status structure in its entirety, and the
interaction between the individual and the context. Investigating unit-level properties of a status structure is of particular theoretical and practical relevance in organizations, which are often comprised of multiple independent teams. The second study of this dissertation introduces one element of a status structure proposed to be related to employee health: status inequality, or the extent to which status positions in a distribution are dispersed. Thus, the status inequality construct captures the relational nature of status by accounting for the totality of status differences within a team, and provides an additional framework for understanding status-based health disparities from an organizational perspective.

Manuscript 2

Manuscript 2 extends Manuscript 1 by examining status in teams in light of these relational properties. Studying status in organizational teams provides a natural context for social comparisons, and thus an ideal setting for exploring the relational nature of status and how it may relate to health.

Several hypotheses are developed and tested about the effects of status and status inequality on health in teams at both the individual- and unit-level of analysis. Regardless of SES, relatively high status within a team is suggested to be positively related to health due to the many advantages associated with higher status. Next, greater status inequality at the team-level is hypothesized to negatively relate to health. Status inequality is a representation of social distance (Bottero & Prandy; 2003; Prandy, 1999), suggesting that teams with greater status inequality are also more socially fragmented, and the health of
individuals who feel socially disintegrated tends to suffer as a result (Seeman, 1996; 2000; Uchino, 2004).

In addition to these main effects, an interaction effect between status and status inequality is proposed, such that status inequality has a more negative influence on health for individuals with lower status because the advantages of occupying high-status positions are health-protective. Beyond health, Manuscript 2 introduces two additional outcome variables, performance (at the individual- and unit-level) and individual thriving across time, and explores whether cooperative team behaviors may mediate the relationship between status inequality and outcomes.

**Manuscript 3: Conceptual Development**

Based on and developing the findings of Manuscript 1 and 2, the fourth chapter of my thesis, Manuscript 3, provides an in-depth conceptual analysis of how status inequality relates to team-level health and performance outcomes. Status inequality is suggested to influence social cognition, specifically team members’ perceptions of themselves in relation to the team. Social cognition is the foundation of social structure (Fiske, 1991; Howard, 1994; Morgan & Schwalbe, 1990; Pierce & White, 1999; Ridgeway & Correll, 2004). Manuscript 3 describes how status inequality, by influencing social cognition, enables the emergence of “agonic” social structures (Pierce & White, 2006), which are characterized by imbalances in dominance and influence, centralized decision-making, distrust, and competition. This emergence is contingent on the team’s shared cultural values, such that when teams share low-power distance and strong
collectivist values, status inequality should not enable the formation of an agonic social structure. Social structure is then proposed to shape team health and performance. This conceptualization reflects a macro-micro-macro approach, where properties of the team influence micro-level cognition, from which the team’s social structure evolves.

Summary

To summarize, this dissertation begins by providing a dynamic account of the relationship between SES and health within the context of the work stress literature. Manuscript 1 uses a longitudinal, representative sample of employed Canadians to test a number of hypotheses about SES and work stressors, psychological resources, and physical health. However, while SES has clearly-documented health implications, the SES construct is typically interpreted irrespective of many of the definitional properties of status that have been clarified in the sociological literature on status in small groups (Berger et al., 1980). Most relevant is that due to their macro outlook, indicators of SES often do not adequately capture the relational nature of status, which is understood through salient social comparisons.

Manuscript 2 asks whether status differences present at a more micro, team-level of analysis and derived from characteristics within the organization are related to employee health. Moving from a conceptualization of status at the individual-level, Manuscript 2 also proposes that the distribution of status positions within teams is associated with individual and team health, as well as with performance and individual
thriving across time. These hypotheses are tested using an archival sample of National Basketball Association players and teams across six basketball seasons.

Finally, I develop a conceptual model that extends the focus on status distributions in teams by providing an exploration of the social mechanisms that relate status inequality to team health and performance, and the moderating properties of shared cultural values.
1.1 References


Chapter 2

Manuscript 1: Disentangling the Indirect Links between SES and Health: The Dynamic Roles of Work Stressors and Personal Control

Abstract

Prior research has consistently documented a link between socio-economic status and health, and the goal of this study is to help unravel this phenomenon from a dynamic, workplace perspective. We hypothesize that socio-economic status is positively related to feelings of personal control and negatively related to perceived work stressors. Drawing on dynamic conceptualizations of these psychosocial factors, we suggest that they respond to one another, escalating over time. Higher socio-economic status individuals who have higher levels of personal control experience increasingly fewer work stressors compared to those with lower levels of personal control, and those who experience greater work stressors increasingly perceive less personal control compared to those with fewer work stressors. Finally, this compounding relationship between personal control and work stressors is associated with health differentials over the same period. Our model was tested using three-wave data (over four years) from a nationally representative sample of Canadian employees (N = 3,419). Latent curve modelling (LCM) provided support for the proposed dynamic model. Conceptual and practical implications are drawn, and suggestions for future research outlined.
2.1 Theoretical Development

Status has inspired scholarship across time and discipline, as evidenced by its ubiquity within the social sciences. Anthropologists and sociologists explore how status organizes and stratifies (e.g., Gould, 2002), psychologists how it relates to social identity (e.g., Tajfel & Turner, 1979), and epidemiologists how socio-economic (SES) is linked to mortality, health, and well-being (Marmot, 2004). Common across approaches, and inherent in this research, is the relationship between status and the social environment. We focus in this paper on SES, the psychosocial work environment, and health.

Our interest in SES and health is not novel; socioeconomic health inequalities have long attracted scholarly attention (Gallo & Mathews, 2003). With few exceptions, a wide accumulation of empirical research has shown that health is stratified by SES, such that people with lower status are more prone to poor health and diminished longevity (e.g., Marmot, Shipley, & Rose, 1984; see Marmot, 2004 for a review). Importantly, this disparity is not a simple divide between rich and poor; the relationship is monotonic (called the “social gradient”; Marmot, 2004, p. 2): Regardless of position in the SES hierarchy, individuals typically enjoy better health and longevity than those occupying lower positions, and vice versa. Thus, even people who hold relatively high levels of SES lag behind their counterparts who have more SES, in terms of health and longevity.

There is an extensive body of cross-disciplinary research focused on identifying the underlying factors of this disparity, the findings of which make clear that the social
gradient in health is multiply-caused (see Gallo & Mathews, 2003). Risk factors such as unequal access to health care, upward social mobility, and health behaviors help account for the inequity (e.g., Kristenson, Eriksen, Sluiter, Starke, & Ursin, 2004; Marmot & Shipley, 1996). It is equally clear that these factors cannot alone account for this phenomenon. Elements of the psychosocial environment play a key role (e.g., Adler, Boyce, Chesney, Cohen, Folkman, Kahn, & Syme, 1994; Krieger, Williams, & Moss, 1997), particularly workplace factors (Marmot & Shipley, 1996; Stansfeld, Head, & Marmot, 1998). Further, recent models propose that the SES-health relationship operates through these multiple pathways indirectly (see Gallo & Matthews, 2003). The goal of this study is to help unravel the indirect link between SES and health by understanding the contribution of dynamic elements of the psychosocial work environment.

Past research shows that stressful work can help to explain health disparities, as work stress is more common for individuals in lower SES positions, and is negatively related to health (e.g., Warren, Hoonakker, Carayon, & Brand, 2004). Likewise, psychological resources (such as personal control) also account for the poorer health of individuals with lower SES who draw on a less abundant supply of these resources (e.g., Pearlin & Schooler, 1978). However, static conceptualizations of work stressors and personal control—which characterize much of the prior research in this area—can tell us little about the enduring nature of the relationship between SES and health, which tends to continue across an individual’s life course (Hallqvist, Lynch, Bartley, Lang, & Blane, 2004), because these psychosocial factors are likely to change over time.
In contrast, we suggest that the way in which perceptions of personal control and subjective work stressors indirectly link SES to health needs to be conceptualized differently, and that health disparities can be appreciated more fully by exploring their often-overlooked dynamic quality. While most empirical research has treated resources such as personal control as a buffer to stress, and stressful work as the product of fixed job characteristics (e.g., see de Lange, Taris, Kompier, Houtman, & Bongers, 2003 for a review), theory suggests that both are dynamic, and as we argue here, responsive to each other. Integrating and expanding on existing theory, we generate and test a model that suggests that individuals lower in SES typically face working environments that both produce stress and deplete perceptions of personal control (e.g., Gallo & Matthews, 2003; Kristenson et al., 2004). In turn, work stressors and personal control interact with each other, escalating over time, further accentuating health disparities. We detail this model (see Figure 2-1 for hypothesized relationships) in the following sections, and then test the model using a representative sample of working Canadians across a four-year period (with three measurement occurrences) using latent curve modeling (LCM).
Figure 2-1: Hypothesized Multivariate LCM Paths
SES, the Psychosocial Work Environment, and Health

SES

SES is a relative ranking based on resources and prestige (e.g., Krieger et al., 1997). In studies of health inequalities, three indicators are used most often to capture SES, namely income, occupational prestige, and education; although interrelated, these factors are not equivalent (Gallo & Matthews, 2003). Each of the three indicators captures the resource and prestige domains of SES, with higher levels being more socially desirable and signalling greater purchasing power. In addition, each offers a unique advantage to the study of SES-based health differentials. While income and occupational prestige may be most closely related to an individual’s earned social prestige at adulthood, the relationship between educational attainment and health is unlikely to reflect reverse causation because education is most often earned before the onset of major health problems (Gallo & Matthews, 2003). Thus, income and occupational prestige may best reflect SES as individuals’ age and educational attainment becomes less relevant, however, relating education to health can help to isolate the directional effects of SES on health, given that evidence suggests that SES can both precede and respond to health conditions (the “social drift” hypothesis; Mulatu & Schooler, 2002). Whilst so, tests of causal relationships between the SES indicators and health are beyond the scope of this study.

SES and Work Stressors
By definition, higher status individuals are those afforded greater substantive and social luxuries, such as money, power, and opportunity, the benefits of which are far reaching (Adler et al., 1994). Work is a source of respect and self-validation for individuals in higher status jobs (Kivimäki et al., 2005), so much so that social status is considered a primary motivation (Barrick, Stewart, & Piotrowski, 2002), and individuals are willing to forgo absolute rewards to enhance their relative position in a status hierarchy (see Schnittker & McLeod, 2005). As a result, a growing body of literature suggests that SES directs the way that people interpret and enact their environments (Snibbe & Markus, 2005) and that individuals of varying status levels experience work differently (Aquino, Galperin, & Bennett, 2004).

Aquino et al. (2004) suggest that higher status individuals’ worth to the organization is clearly acknowledged through material and symbolic recognition, while those with lower status more often experience “self-invalidating events” that undermine personal autonomy. Thus it should not be surprising that individuals with lower job status report more chronic stressors such as interpersonal conflicts, boredom, social strain, hostility at work, job insecurity, and physical or dangerous working conditions (Burke, 2002; Gallo et al., 2005).

Unfavorable job characteristics are more common in low SES occupations (Warren et al., 2004). Specifically, while having control over one’s work is thought to buffer individuals from experiencing stress and strain by providing latitude to manage or cope with job demands (e.g., Karasek, 1979; Karasek & Theorell, 1990), research shows
that such autonomous working conditions are more likely to be present for higher SES individuals who occupy positions of formal power in the organization than those with lower SES (e.g., Bosma et al., 1997; Hallqvist, Diderichsen, Theorell, Reuterwall, Ahlbom, & SHEEP Study Group, 1998).

By contrast, while physical demands are more common in lower SES jobs (e.g., Burke, 2002), individuals with higher SES often report more job demands and longer working hours (e.g., Hallqvist et al., 1998; Stansfeld et al., 1998). Nonetheless, perhaps more important is that SES is related to the experience of job demands and consequently, health disparities. Kunz-Ebrecht, Kirschbaum, and Steptoe (2004) found that job demands were greater for higher SES individuals than for lower SES individuals, but that high job demands negatively affected physiological health only for those of lower SES. Similarly, drawing on Karasek’s (1979) demand-control model, which posits that the stressful jobs are those that are psychologically demanding and provide little job control (i.e., the strain hypothesis), research shows that the health of lower SES individuals is more strongly related to these “strain” conditions (Hallqvist et al., 1998; Landsbergis, Schnall, Pickering, Warren, & Schwartz, 2003).

Based on past research showing that lower SES individuals typically perceive more work stressors than higher SES individuals, we hypothesize that perceptions of stressful work experiences vary according to three SES variables.

*Hypothesis 1: Income, education, and occupational prestige will be negatively associated with subjective work stressors.*
**SES and Personal Control**

Theories of stress have emphasized the health-protective role of resources, which are posited to promoting resilience and coping (e.g., Hobfoll, Johnson, Ennis, & Jackson, 2003; Karasek & Theorell, 1990). Resources go beyond such tangible aspects as property, insurance, and finances to include personal resources such as personal control, optimism, and self-esteem (see Gallo & Matthews, 2003). By definition, higher SES individuals enjoy greater access to tangible resources, however, they also benefit from greater access to psychological resources (e.g., Marmot & Theorell, 1988), in part due to feelings of relative advantage and greater opportunity for social involvement (Gallo & Matthews, 2003). In this paper we focus on one psychological resource: personal control (also referred to as personal mastery), or the *perception* that one has control and influence over life outcomes.

In encountering troubling circumstances and relative deprivation, likely over many years, lower SES individuals may develop a sense of learned helplessness or hopelessness (the opposite of personal control) that obstructs control beliefs (Bailis et al., 2001; Kristenson et al., 2004). Research shows that lower status individuals experience less control in small groups; they are given fewer opportunities to voice their opinions and make decisions (Driskell & Mullen, 1990). Similarly, lower SES individuals may have weaker control beliefs because they lack positions of formal authority and power in organizations (e.g., Aquino et al., 2004; Lamertz & Aquino, 2004) that allow higher SES individuals to direct the behavior of others and the outcomes that they wish to achieve.
Accordingly, Lachman and Weaver (1998) argue that SES, as indicated by income level, may shape how the relationship between effort and reward is perceived in organizations.

_Hypothesis 2: Income, occupational prestige, and education will be positively associated with perceived personal control._

The goal of the present research is to understand the compounding relationship between work stressors and resource availability, and how it indirectly links SES to health. In the following section, we depart from much previous empirical research, and draw on frameworks such as Hobfoll’s (1989, 2001) conservation of resources theory, Gallo and Mathew’s (2003) reserve capacity model, and Karasek and Theorell’s (1990) learning spirals to outline how work stressors and personal control interact dynamically to explain health differentials.

The Dynamic Contribution of Work Stressors and Personal Control

Past research has primarily captured the static contribution of the psychosocial environment to health disparities. W warranting clarification is that some research has been based on longitudinal data (e.g., Bosma et al.’s [2005] 5-year follow-up study). However, such studies characteristically conceptualize work stressors and personal control or other psychological resources as largely stable or anchored across time, for example, by relating work stressors at time 1 to future health. In contrast, we suggest that a more nuanced conceptualization would view work stressors and control as variable across time, and that it is the dynamic nature of the stress process that will best account for the persistent relationship between SES and health. Specifically, we hypothesize that
perceptions of stressful work are associated with future changes in personal control and that perceived control is related to future reports of work stressors, resulting in an escalation over time that can sustain health inequalities.

*Initial Work Stressors and Future Personal Control*

Established models of work stress conceptualize resources as a buffer, such that stress will be less damaging for individuals who have stronger resources, because resources can be deployed to help the individual battle stressful conditions (Karasek & Theorell, 1990). Conservation of resources theory suggests that resources are not static over time or situation, but instead are responsive to life events (e.g., Hobfoll et al., 2003). Accordingly, resources may help to buffer the potential strains of stressful conditions, but whilst doing so, the bank of resources is likely to be reduced or weakened. This notion is evident in understanding the impact of natural disasters on social resources and health. In one study, flood victims perceived social support to be lower in the aftermath of a severe hurricane, a perception that was central to predicting psychological distress (Norris & Kaniasty, 1996). The authors argue that disasters undermine community-wide mechanisms of social support and embeddedness.

However, resource deterioration occurs following less severe incidences of stress and for psychological resources such as personal control as well (Ensel & Lin, 1991). Hobfoll et al. (2003) showed that economic stress occurring from greater material loss was associated with a greater loss of personal control over a nine-month period. Holahan, Holahan, Moos, and Cronkite (1999) argue that stressful life events influence
psychological resources by altering individuals’ cognitive evaluation of their resources, which explains why psychological resources, and personal control in particular, may be responsive to experiences of workplace stressors. For example, during times of employment insecurity, individuals often feel a loss of personal control over their lives and future opportunities (Sverke, Hellgren, & Näswall, 2002).

Changes in personal control associated with experiences of stressors are likely to persist across time. The basic tenet of conservation of resources theory is that stress arises when individuals lose resources, impeding their ability to cope and invest in additional resources. Further, faced with an already limited supply of a resource, individuals often lack the resources necessary to mobilize remaining resources to offset initial losses. Individuals who have a larger store of resources can draw on them to cope and replenish those that were depleted. Accordingly, resource change is thought to spiral, such that initial resource loss leads to future loss, while initial resource gain fuels further gains (Hobfoll, 1989, 2001). In terms of personal control, individuals who have a greater sense of control should be more likely to face challenging workplace situations with greater optimism and confidence, minimizing negative outcomes and reinforcing their sense of personal control, and vice versa.

To summarize, the dynamic nature of and interaction between work stressors and personal control suggests that individuals who perceive more work stressors are more likely to deplete their personal control resources than their counterparts who perceive their work more positively and enjoy the benefits of personal control increases. Over
time, these differences compound as loss begets loss and vice versa. Because individuals with lower SES are subject to work stressors more so than individuals with higher SES, they are at a greater risk of having their personal control increasingly diverge from those with higher SES through the stress process.

**Hypothesis 3:** Initial ratings of work stressors will be negatively related to the trajectory of personal control across time, such that individuals who rate their work as more stressful will report increasingly less personal control across time than individuals who rate their work as less stressful.

**Initial Personal Control and Future Perceptions of Work Stressors**

We draw on existing theory of general psychosocial resources and stressors to argue that experiences of personal control should relate to later perceptions of work stressors. Gallo and Mathews’ (2003) reserve capacity model posits that lower SES individuals have fewer resources or “reserve capacity” available to cope with stressful events than higher SES individuals because they face more situational factors that cause them to deplete their resources, and their relatively constricted environments simultaneously impede the restoration and expansion of the reserve. Gallo and Mathews argue that having low resource availability heightens the risk of future reoccurrences of stressors through emotional pathways and inability to recover from stress. Empirical evidence supports this model in the context of work stressors and personal control. In a daily study, Gallo et al. (2005) found that lower SES women had fewer psychological
resources available to them (including personal control), which were directly connected to more stressful daily experiences at work and home.

Individuals with less SES are at a double disadvantage; they more often encounter stressing situations that require the use of resources, but have fewer resources to access when they need them the most—making it likely that the stressors will recur and grow stronger across time. For those with more abundant resources the reverse should be true. Theories of coping suggest that when individuals perceive stressors as challenges over which they have control, they are more likely to apply problem-focused coping strategies to directly alleviate the stressors (Folkman & Lazarus, 1985). Complementing conservation of resources theory, this notion is supported in research on workplace stressors or “learning spirals”, where past perceptions of work events relate to similar future perceptions due to processes of expectation and learning (Karasek & Theorell, 1990; Kristenson et al., 2004). Expectations of one’s ability to overcome straining conditions are acquired and learned through past successes and coping ability. Active, challenging working conditions and successful coping stimulates learning and competencies that can then be applied to future work challenges perpetuating the learning cycle (Karasek & Theorell, 1990; Parker & Sprigg, 1999). By contrast, chronic work stressors invoke a sense of powerlessness, and thus inhibition, limiting the extent to which future challenges will be actively approached (Ketlner, Gruenfeld, & Anderson, 2003).
Thus, our model suggests individuals with less personal control will be more prone to experiencing stressors, and these stressful experiences will intensify over time. A compounding effect should occur across time as work stressors for individuals with higher versus lower initial levels of personal control continually diverge and grow more disparate.

_Hypothesis 4: Initial ratings of personal control will be negatively associated with the trajectory of work stressors across time, such that individuals who rate their personal control as lower will perceive increasingly more work stressors across time than individuals who rate their personal control as higher._

*Relating Psychological Resources, Work Stressors, and Health over Time*

Our final hypotheses suggest that individuals’ trajectories of personal control and work stressors relate to health outcomes, and in particular, physical health outcomes, thus providing further insight into the compounding nature of the SES – health relationship.

Multiple studies have demonstrated a relationship between personal control and physical health (e.g., Bailis et al., 2001). Penninx, van Tilburg, Kriegsman, Deeg, Boeke, and van Eijk (1997) suggest that personal control may be related to physical health directly through psychobiological pathways, and by its relationship with coping mechanisms and health behaviors such as smoking and alcohol consumption. The authors found empirical evidence supporting a direct link between personal control and mortality, but little to suggest that health behavior could account for the relationship. We apply these findings to our dynamic account of personal control, hypothesizing that individuals’
changes in personal control will be related to their trajectory of health problems over
time. Specifically, to the extent that individuals experience more rapid declines in
personal control, they should more rapidly accumulate physical health problems over
time:

Hypothesis 5: The trajectory of personal control will be negatively related to the
trajectory of physical health problems over time, and be negatively associated
with physical health problems at the final time point.

Our final hypothesis relates individuals’ experiences of stressful work across time
to their health outcomes. Stressful experiences may influence physiological health by
over-taxing the mechanisms through which the body naturally responds and reacts to
stress (Kristenson et al., 2004). When stressors persist, they have relatively greater
implications for healthy bodily functioning. Thus, given evidence of the relationship
between chronic work stressors and physical health (e.g., Kivimäki et al., 1997), we
argue that the greater the increase in perceptions of stressful work over time, the poorer
will be health, and vice versa, as hypothesized below.

Hypothesis 6: The trajectory of work stressors will be positively related to the
trajectory of physical health problems over time, and be positively associated with
physical health problems at the final time point.

2.2 Methods

Study Design
Data used in the study were drawn from a representative sample (based on age, sex, and geography) of Canadian workers from the National Population Health Survey (NPHS). We used a subset of the NPHS, which is a national probability survey that began in 1994 with approximately 17,000 participants, with measurement periods every two years since that time (cycles 1 through 6), and includes questions relating to health predictors, health behaviors, and health outcomes. The target population of the NPHS was Canadians across ten provinces, excluding those who were institutionalized, or living on Aboriginal Peoples Reserves and military bases. Only one individual per household was randomly selected to participate in the study, with a rejective method that excluded a portion of households with no members under the age of 25 to ensure that parents and children were not underrepresented in the sample. The sample of households was selected from within clusters (based on province, geography, and socio-economic factors) using a multi-stage stratified design. Trained interviewers from Statistics Canada’s Calling Centres used a computer-assisted telephone interview technique to administer the questionnaire to participants. This technique facilitated the flow of the interview by, for example, automatically identifying invalid answers and eliminating the need for interviewers to refer to earlier survey questions.

**Sampling Weights**

In all descriptive statistics and analyses, the data were weighted using sampling weights to reflect the general Canadian population at the commencement of the NPHS, and to account for attrition over time. The NPHS sampling weights were formed
following a number of steps. First, in 1994 basic weights were calculated as a function of the inverse probability that a given cluster was selected, and the inverse probability that a given household was selected from within a cluster. Second, the longitudinal weights were computed through a number of adjustments to the basic weights for individuals who responded to the survey in all time periods or had died. The basic weights were adjusted to reflect non-response in each of the cycles following cycle 1 using a weighting class approach that classifies individuals by their propensity to respond to the survey according to various characteristics. Finally, the sampling weights were post-stratified to reflect the Canadian population at 1994 according to the census based on age and sex within each province.

Sample Characteristics

To apply the sampling weights described above, we included those participants who responded to the NPHS in all cycles. Further, given our interest in employed individuals, we limited our sample to the subset of participants who were employed during each of the three measurement periods sampled (i.e., 2000, 2002, and 2004). Due to changes in the survey questions, we were unable to include all six NPHS cycles in our analysis. The response rate for the full sample of the NPHS at 2004 was 77.4 percent, and deleting cases listwise (to account for participant non-response to the focal measures used in this study) resulted in the sample of 3,419 working individuals with an average age of 39.5 years in 2000 (57% of whom were male) who were used in the analyses.

Measures
SES. We used three indicators of SES, namely income, occupational prestige, and education, measured at the first time period. While income, occupational prestige, and education are three of the most common measures of SES, past research has clarified that they are distinct, and that researchers should avoid combining them to form a composite index because each offers unique benefits (e.g., Kristenson et al., 2004). Accordingly, we modeled each as separate yet concurrent variables (see Figure 2-1).

*Income* was measured on a 6-point scale (*1* = 0 – $29,999; *2* = $30,000 – $39,999; *3* = $40,000 – $49,999; *4* = $50,000 – $59,999; *5* = $60,000 - $79,999; *6* = $80,000 and above). Next, participants’ occupations were classified based on Standard Occupation Codes. *Occupational prestige* was derived from Human Resources and Social Development Canada’s “National Occupational Classification Matrix” (Statistics Canada, 2006), which arranges occupations by decreasing skill level and educational requirements. “Skill Level A” includes occupations such as engineers, judges, physicians, and accountants, “Skill Level B” includes occupations such as medical technicians, plumbers, and paralegals, “Skill Level C” includes occupations such as clerks, sales representatives, machine operators, and transit drivers, and “Skill Level D” includes occupations such as kitchen helpers, cleaners, and primary production labourers. Based on these classifications, occupational prestige was coded in this study as *1* = skill level D, *2* = skill level C, *3* = skill level B, and *4* = skill level A. Last, *education* ranged on a 5-point scale based on level of formal educational attainment (*1* = some secondary
education; 2 = secondary school graduate; 3 = some post-secondary school education; 4 = college or trade diploma/certificate; 5 = university graduate).

**Personal Control.** Pearlin and Schooler’s (1978) 7-item mastery scale was used to measure personal control. The mastery scale represents individuals’ perceived control over their lives. The scale included items anchored on a 5-point scale (1 = strongly disagree to 5 = strongly agree) (e.g., “what happens to you in the future depends mostly on you”; “you can do just about anything you really set your mind to”). Thus, higher values represent more personal control. To avoid small parameter estimates for the slope coefficients in the LCM analyses, the mean of the personal control items was multiplied by the total number of scale items.

**Work Stressors.** Work stressors were measured using a formative indicator that captures an individual’s perception of stressful experiences at work. Like others (e.g., Garst, Frese, & Molenaar, 2000), we used an index of multiple workplace stressors based on seven items from Karasek and Theorell’s (1990) work stress scale. The measure reflects perceptions of psychological demands, physical exertion, skill utilization, and job insecurity. Sample items rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree) include “your job requires that you do things over and over” and “you are free from conflicting demands that others make” (reverse coded), therefore, higher values indicate greater stressors. Like personal control, the work stressors variable was multiplied by the total number of scale items.
Health. Health was measured as the number of health problems experienced by the participants. Participants were asked to report whether or not they had experienced health problems that lasted or were expected to last six months and were diagnosed by a physician, for example, “high blood pressure”, “migraine headaches”, and “heart disease”. The total number of health problems reported reflected the variable.

Weighted means, standard deviations, correlations, and scale alphas for the study variables are shown in Table 2-1.
Table 2-1: *Descriptive Statistics and Correlations for Study Variables (N = 3,419)*

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<tbody>
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<td>1. Income</td>
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<td>2.71</td>
<td>1.70</td>
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<td>2. Occupational Prestige</td>
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<td>2.07</td>
<td>1.00</td>
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<tr>
<td>3. Education</td>
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<td></td>
<td>3.35</td>
<td>1.25</td>
<td>.30</td>
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<tr>
<td>4. Mastery t1</td>
<td></td>
<td></td>
<td>20.52</td>
<td>3.50</td>
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<td>.17</td>
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<td>5. Mastery t2</td>
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<td>.15</td>
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<td>6. Mastery t3</td>
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<td>.14</td>
<td>.43</td>
<td>.55</td>
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<td>7. Work Stressors t1</td>
<td></td>
<td></td>
<td>19.29</td>
<td>2.31</td>
<td>-.22</td>
<td>-.23</td>
<td>-.15</td>
<td>-.21</td>
<td>-.13</td>
<td>-.12</td>
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<td>8. Work Stressors t2</td>
<td></td>
<td></td>
<td>19.28</td>
<td>2.41</td>
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<td>-.12</td>
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<td>-.19</td>
<td>-.18</td>
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<td>9. Work Stressors t3</td>
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<td>19.20</td>
<td>2.41</td>
<td>-.16</td>
<td>-.16</td>
<td>-.14</td>
<td>-.14</td>
<td>-.22</td>
<td>.36</td>
<td>.49</td>
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<td>10. Health Problems Index t1</td>
<td></td>
<td></td>
<td>.99</td>
<td>1.19</td>
<td>.00</td>
<td>.02</td>
<td>.05</td>
<td>-.06</td>
<td>-.03</td>
<td>-.03</td>
<td>.07</td>
<td>.06</td>
<td>.09</td>
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<tr>
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<td>.02</td>
<td>-.08</td>
<td>-.10</td>
<td>-.09</td>
<td>.10</td>
<td>.07</td>
<td>.10</td>
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<tr>
<td>12. Health Problems Index t3</td>
<td></td>
<td></td>
<td>1.25</td>
<td>1.36</td>
<td>.00</td>
<td>-.01</td>
<td>.02</td>
<td>-.09</td>
<td>-.07</td>
<td>-.10</td>
<td>.09</td>
<td>.11</td>
<td>.12</td>
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</table>

*Note.* Cronbach alphas appear on the diagonal. Correlations of .03 are significant at the .05 level.
Analytic Strategy

We conducted our analyses using an LCM approach in LISREL 8, which models individual latent trajectories for variables with repeated measures. LCM uses a latent intercept factor (the initial starting point of a variable) and latent slope factor (the change in the variable across time) to capture person-specific trajectories. While our final model hypothesizes simultaneous growth among work stressors, personal control, and health (i.e., a multivariate LCM), following recommended strategy, we began by examining (1) the scales for invariance, and (2) the structure and fit for the trajectories of each of the three growth variables separately (i.e., univariate LCMs) before combining them in a single model (Bollen & Curran, 2006).

For each of the univariate LCMs, the intercept paths were fixed to 1, and for work stressors and personal control; the slope paths were represented by 0, 1, and 2 respectively to capture linear change. With three time periods, a non-linear univariate LCM would have zero degrees of freedom. By contrast, we modelled the slope parameters for health such that they were centred on the final time point, specifically as –2, –1, and 0, so that we could investigate hypotheses 5 and 6. We compared two alternative model specifications for each of the univariate LCMs, first a homoscedastic model where the residual variances of the repeated measures are constrained to be equal, and second, a heteroscedastic model where residual variances of the repeated measures are not assumed to follow such a pattern. Willet and Sayer (1994) suggest that while more parsimonious, the homoscedastic model is often unrealistic. After confirming the
best-fitting univariate models, we tested the multivariate LCM with our hypothesized paths freely estimated. See Figure 2-2 for a complete depiction of the multivariate LCM used to test all hypotheses.

All models were evaluated using accepted fit indices within the structural equation modelling framework (guidelines for acceptable fit are given in parentheses): the chi-squared goodness of fit index ($\chi^2$), the comparative fit index (CFI; Bentler, 1990; .95 and above), the non-normed fit index (NNFI; Bentler & Bonnett, 1980; .95 and above), the root-mean-square error of approximation (RMSEA; Steiger, 1990; .08 and below), and the standardized root-mean square residual (SRMR; .08 and below).

Alternative nested models were evaluated using the chi-squared difference test ($\Delta\chi^2$), the logic of which is that less parsimonious models warrant significant improvements in model fit. However, because chi-squared tests have less meaning when based on large sample sizes such as that of the present study (Kelloway, 1995), we followed others in placing great importance on improvements in practical fit indices, and in particular changes in CFI, when comparing alternative models (Sacco & Schmitt, 2005).

Specifically, we determined that a less parsimonious model provided better fit to the data than a more parsimonious model only if it offered clear improvements on both the chi-squared test and CFI (i.e., changes of .02 or above, which are considered improvements; Sacco & Schmitt, 2005).
2.3 Results

Measurement Invariance

A prerequisite to LCM is demonstrating measurement invariance across time periods, or in other words, showing that the focal constructs remain unaltered at different measurement periods (Chan, 1998). Following Chan’s procedures, we conducted tests of factorial measurement invariance for the one reflective scale used in the study: personal control. Specifically, an invariant measure will be represented by an equal number of factors across time periods, comprised of identical items or item parcels with equivalent factor loadings. To test these criteria we compared two models. Model 1 constrained each time-specific item parcel to load equivalently on each time-specific latent factor (i.e., personal control at time 1, time 2, and time 3), whereas Model 2 allowed these loadings to be estimated freely across time. The measure was determined invariant if Model 2 failed to provide substantive improvement in model fit.

Item parcels formed on the basis of exploratory factor analysis (Bagozzi & Edwards, 1998) were used in the confirmatory factor analyses. Item parcels combining two or three items can provide more stable parameter estimates (Bagozzi & Edwards, 1998) and are appropriate for unidimensional scales (Little, Cunningham, Shahar, & Widaman, 2002; see Pearlin & Schooler, 1978 for the factor structure of the scale). Model 1 showed an acceptable fit to the data $\chi^2 (28, N = 3419) = 673.58 \ p < .01$, $CFI = .96$, $NNFI = .95$, $RMSEA = .09$, and $SRMR = .05$. We next compared Model 1 to Model 2, where factor loadings were freely estimated. Model 2 fit the data as follows: $\chi^2 (24, N$
While $\Delta \chi^2 = 6.23 p < .01$, Model 2 offered no improvements on any of the other fit indices examined, thus providing evidence of measurement invariance. These results replicate previous findings showing the scale’s measurement invariance across time (see Pearlin, Menaghan, Lieberman, & Mullan, 1981).

**Univariate LCM Analyses**

In all cases the univariate LCMs fit the repeated measures well. Fit indices and model comparisons for each of the univariate LCMs are shown in Table 2-2. The results reveal that homoscedastic models fit the data best, and thus were retained. These findings suggest that the three variables were rated with equivalent precision at each measurement occurrence. Also relevant is that the univariate LCMs demonstrated substantial variation in both the average intercept (for work stressors $\sigma^2 = 2.40 p < .01$; for personal control $\sigma^2 = 5.66 p < .01$; for health problems $\sigma^2 = 1.08 p < .01$) and slope factors (for work stressors $\sigma^2 = .35 p < .01$; for personal control $\sigma^2 = .51 p < .05$; for health problems $\sigma^2 = .10 p < .01$) for the retained models. Therefore, individuals differed in both the starting points and slopes of their trajectories. The purpose of the multivariate LCM analyses was to test how these individual trajectories varied by introducing the hypothesized paths in Figure 2-2.
Table 2-2: Test of Alternative Model Specifications for Unconditional LCMs

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>NNFI</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>$\Delta df$</th>
<th>$\Delta \chi^2$</th>
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<tbody>
<tr>
<td>Personal Control</td>
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<tr>
<td>Homoscedastic Errors</td>
<td>50.54**</td>
<td>3</td>
<td>.98</td>
<td>.98</td>
<td>.07</td>
<td>.03</td>
<td></td>
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<tr>
<td>Heteroscedastic Errors</td>
<td>28.88**</td>
<td>1</td>
<td>.99</td>
<td>.96</td>
<td>.09</td>
<td>.00</td>
<td>2</td>
<td>21.66**</td>
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<tr>
<td>Homoscedastic Errors</td>
<td>9.93*</td>
<td>3</td>
<td>1.00</td>
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<td>.03</td>
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<tr>
<td>Heteroscedastic Errors</td>
<td>1.00</td>
<td>1</td>
<td>1.00</td>
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<td>0</td>
<td>0</td>
<td>2</td>
<td>8.93*</td>
</tr>
<tr>
<td>Health Problems</td>
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<tr>
<td>Homoscedastic Errors</td>
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<tr>
<td>Heteroscedastic Errors</td>
<td>31.55**</td>
<td>1</td>
<td>.99</td>
<td>.98</td>
<td>.09</td>
<td>.00</td>
<td>2</td>
<td>20.04**</td>
</tr>
</tbody>
</table>

* $p < .05$

** $p < .01$
Figure 2-2: Multivariate LCM Unstandardized (and Standardized) Parameter Estimates for Hypotheses 1 through 6
Note: Unstandardized parameter estimates for hypothesized multivariate LCM (fully standardized solution appears in brackets). Residual variance parameters and means for exogenous and latent growth variables measured but not displayed due to space restrictions. Fixed factor loadings for intercept variables are 1, 1, and 1 moving from left to right for personal control and work stressors, and 1, 1, and 1 moving from top to bottom for health problems. Fixed factor loadings for slope variables are 0, 1, and 2 moving from left to right for personal control and work stressors, and -2, -1, and 0 moving from top to bottom for health problems (health problems is centered on the final time point).

* $p < .05$

** $p < .01$
**Multivariate LCM Analyses: Hypothesis Testing**

Parameter estimates for the multivariate LCM are located in Figure 2-2. The hypothesized model fit the data well $\chi^2 (51, N = 3419) = 420.27, p < .01$, CFI = .97, NNFI = .97, RMSEA = .05, and SRMR = .04, and was largely supportive of the hypotheses. Hypothesis 1 stated that each of the SES variables would be negatively related to work stressors, which is evidenced by the significant negative paths between income, occupational prestige, and education and the intercept of work stressors. The three SES indicators explained 12 percent of the variance in work stressors. As expected (Hypothesis 2), the opposite pattern of results emerged for personal control, where income, occupational prestige, and education were positively associated with the latent intercept variable for personal control, collectively explaining 8 percent of its variation.

Our next hypotheses concerned the trajectories of personal control, work stressors, and health problems. In support of Hypothesis 3, the latent intercept variable for work stressors was negatively related to the slope factor for personal control; thus, individuals’ initial status of work stressors was inversely related to their rate of change in personal control. Initial work stressors explained 17 percent of the variation in the slope of personal control. Figure 2-3 illustrates this result graphically. On average, individuals with higher initial levels of work stressors perceived increasingly less personal control compared to individuals who began with lower work stressors.
Figure 2-3: Plotted Trajectories for Hypothesis 3

Note. Predictors were centered to aid interpretation of plots. “Work Stressors +1SD” represents initial work stressor levels at one standard deviation above the centered mean, and “Work Stressors -1SD” represents initial work stressor levels at one standard deviation below the centered mean. The trajectory reflects only the hypothesized relationship between the intercept of work stressors and slope of personal control; given that our hypotheses were tested in an omnibus model with relationships between the intercept of personal control (work stressors) and slope of work stressors (personal control), a concurrent relationship between the intercepts was not warranted. Thus, the intercept of personal control is shown as equivalent at +1SD and – 1SD of work stressors in the figure above (see Figure 2-1 for the model tested).
Hypothesis 4 related change in perceptions of stressful work to initial levels of personal control. The negative relationship between the intercept of personal control and the slope of work stressors supports this hypothesis (7% of the variance in the slope of work stressors was accounted for by the intercept of personal control). Figure 2-4 illustrates that, on average, individuals who began with lower levels of personal control reported progressively more work stressors over time in comparison to individuals who began with higher levels.
Figure 2-4: Plotted Trajectories for Hypothesis 4

Note. Predictors were centered to aid interpretation of plots. “Personal Control +1SD” represents initial personal control levels at one standard deviation above the centered mean, and “Personal Control -1SD” represents initial personal control levels at one standard deviation below the centered mean. The trajectory reflects only the hypothesized relationship between the intercept of personal control and slope of work stressors; given that our hypotheses were tested in an omnibus model with relationships between the intercept of personal control (work stressors) and slope of work stressors (personal control), a concurrent relationship between the intercepts was not warranted. Thus, the intercept of work stressors is shown as equivalent at +1SD and – 1SD of personal control in the figure above (see Figure 2-1 for the model tested).
Hypotheses 5 and 6 related the slopes of personal control and work stressors to health and are represented in Figure 2-5 and Figure 2-6. First, the slope of personal control was negatively related to the slope of health conditions across the same time period, and to the total number of health conditions at the final time point. Supporting Hypothesis 5, rates of change in personal control and health problems moved in opposition with one another, with declines in personal control related to more health problems accumulated concurrently by time 3. Finally, steeper increases in work stressors resulted in a greater number of health problems reported at the final time point, however, the slope of work stressors did not relate to the slope of health problems experienced by participants. Overall, six percent of the variability in health problems at the final time point and seven percent of variability in the slope of health problems was explained by changes in work stressors and personal control. These results partially support Hypothesis 6.
Figure 2-5: Plotted Trajectories for Hypothesis 5

Note. Predictors were centered to aid interpretation of plots. “Slope Personal Control +1SD” represents the plotted trajectory of an individual with a positive slope of personal control at one standard deviation above the mean, and “Slope Personal Control -1SD” represents the plotted trajectory of an individual with a negative slope of personal control at one standard deviation below the mean.
Figure 2-6: *Plotted Trajectories for Hypothesis 6*

Note. Predictors were centered to aid interpretation of plots. “Slope Work Stressors +1SD” represents the plotted trajectory of an individual with a *positive* slope of work stressors at one standard deviation above the mean, and “Slope Work Stressors -1SD” represents the plotted trajectory of an individual with a *negative* slope of work stressors at one standard deviation below the mean.
2.4 Discussion

A considerable body of research documents a link between SES and health. The organizational literature has been relatively silent about the explicit relationship between SES and employee health and well-being, instead SES indicators, such as occupational position, education, and income have been treated as nuisance variables whose influence must be excluded (Adler et al., 1994; Krieger et al., 1997). The goal of this study was to rectify this omission, by developing and testing empirically a model that offers an explanation of an indirect relationship between three SES variables and health. In particular, our model is founded on the dynamic relationship between perceptions of work stressors and personal control, thus making theoretical contributions to both the health inequalities and work stress literatures. The results of this study show that the dynamic psychosocial work environment plays a substantial role in relating SES variables to physical health outcomes.

The present results show that lower income, occupational prestige, and education are associated with more stressful work and with lower personal control, and that this disparity is strengthened across time. Individuals who initially reported more work stressors perceived increasingly less personal control over time than those who initially reported fewer work stressors. Traditionally, work stress models have treated resources such as control as a buffer to the negative effects of work stress; however, the results shown here suggest that personal control could also respond to stress. Holahan et al.
(1999) proposed that life events challenge the cognitive evaluations the individual’s make about their psychological resource availability – in the light of a negative life event, individuals perceive their resources as less abundant. In the present study, encountering stressful work may have undermined feelings of personal control over life occurrences, leaving individuals less equipped to face future stressors, and more likely to experience a loss of control. While the nature of the study does not permit causal inferences, these results are consistent with COR theory’s central tenet of resource spirals.

Similarly, individuals reporting lower levels of personal control at the initial time point reported increasingly more work stressors over time compared to those reporting higher initial levels of resources. The results offer a dynamic account of the work stress process. Llorens, Schaufeli, Bakker, and Salanova (2007) provide preliminary evidence of a “positive spiral” of psychological resources and the way in which work is experienced, showing that across two time periods initial resources were associated with subsequent work engagement. Given our use of three time periods, the present study extends these findings to illustrate that personal control is related to subsequent change in work stressors, and in negative directions as well. Thus, while higher levels of psychological resources may help individuals to approach and learn from their work environments, leading to more positive encounters in the future, lower levels of psychological resources may inhibit such behavior, and limit the extent to which individuals can recover from stress. These findings provide support for Karasek and
Theorell’s (1990) conceptualization of learning spirals, and emphasize that the dynamic nature of stress and stress recovery deserves greater research attention going forward.

In turn, changes in both personal control and work stressors were related to trajectories of health over the same time period. Individuals who experienced steeper increases in work stressors experienced significantly more health problems by the third measurement period. Steeper increases in personal control were associated with simultaneously steeper declines in negative health outcomes, and significantly fewer health problems at the final time point, and vice versa. Thus, the compounding nature of personal control and work stressors was also reflected in changes in physical health across the three time periods.

The findings of this study help unravel the indirect relationship between SES and health, which is not static; instead, it builds across time, further explicating the nature of health inequalities and their trajectory across the life course. Higher SES individuals report greater personal control and less work stressors than lower SES individuals, which escalate as the personal control and work stressor levels of higher and lower SES individuals increasingly diverge from one another. Through this process, health responds to changes in both personal control and work stressors, further distinguishing between those who begin with higher and lower SES. While past research has acknowledged the indirect, static contribution of personal control and work stressors to health inequalities, this study emphasizes that the escalating nature of these factors explains why the
relationship between SES and health tends to sustain (e.g., Hallqvist et al., 2004), and
perhaps gain momentum, across time.

These results have a number of practical implications for employee health and
well-being in organizations. First, preventing stressful working environments may be
more complicated, yet yield greater returns, than currently appreciated. The dynamic
relationship between work stressors and personal control suggests that interventions
designed to reduce subjective work stressors may too affect individuals’ psychological
well-being more generally. Given the close connection between perceptions of personal
control and general mental health (Bailis et al., 2001), this benefit is accentuated.
Conversely, the results of this study may inform organizations of alternative forms of
work stress intervention, particularly for jobs where work stressors are difficult to
remove. For these jobs, interventions that target improving employees’ senses of personal
control may be sufficient to mitigate subjective work stressors in the long-term.

Second, while objective indicators of SES are largely beyond the control of
organizations (perhaps with the exception of income), recent research suggests the
perceived SES may as relevant to and correlate similarly with health outcomes (e.g.,
Cohen, Alper, Doyle, Adler, Treanor, & Turner, 2008). Perceived SES is most often
operationalized using a ladder scale: participants are asked how their income, education,
and occupational prestige compare to others in their country by indicating their relative
rank on an illustration of a ladder. Organizations may have the opportunity to influence
employees’ SES perceptions even if they cannot change employees’ objective SES
positions. For example, pay policies may influence how employees perceive their income relative to others; employees are likely to make different judgements about their pay when pay schedules in the organization or in an industry are secret versus disclosed. Similarly, organizations that openly pay higher salaries than the industry norm may in turn enhance employees’ perceptions of their SES. Likewise, organizations can also improve employee perceptions of their work’s prestige through socially responsible behavior, market leadership, and similar acts that exemplify the significance of working for the organization.

**Limitations and Future Directions**

Despite the strengths inherent in this study, a number of issues remain to be confronted by future research. First, while the benefits of using a comprehensive archival data set such as the NPHS include access to complex survey designs with robust sampling methods, the inclusion of sample weights that account for attrition and characteristics of the population base, and a large sample size to facilitate complex analytic strategies such as multivariate LCM, archival data are not without their limitations. Like much archival research, we were constrained in this study to include only those work stressor dimensions that were measured in the existing survey questionnaire. Doing so necessarily limited our focus to a subset of one (albeit major) conceptualization of work stress, the job strain model (Karasek & Theorell, 1990). Research has shown the importance of other work stressors, such as the insidious role of chronic work role stress (e.g., ambiguity, conflict, overload, and underload; Beehr &
Glaser, 2005). Furthermore, additional role stress may arise from an inconsistency between an individual’s SES and organizational role (e.g., Bacharach, Bamberger, & Mundell, 1993), suggesting that a challenge for future research will be to both expand the existing model to include role stressors, and disentangle the relationship between SES and role stress.

Further, our archival data source prevented us from including third-variables that could influence the focal relationships. For example, positive or negative affectivity may be related to individuals’ perceptions of work stressors and personal control, their abilities to resist and recover from stress, and their health and well-being. Accounting for individual disposition in the model is left to future research. Furthermore, replications will be needed to ensure that the two-year time lag between measurement occurrences in this study adequately captures stress and recovery processes, which should vary by individual.

Second, in this paper we focus on the psychological resource of personal control. However, other psychosocial resources (such as social support) have received substantial empirical scrutiny and also need to be accounted for in this process. In a daily study of workplace experiences, Gallo et al. (2005) found lower levels of perceived appraisal, belonging, and tangible social support in lower SES groups, which were directly related to less positive and more negative affect. Low SES individuals also suffer most with respect to social resources following major natural disasters (Kaniasty & Norris, 1995; Norris & Kaniasty, 1996). Kaniasty and Norris (1995) call this finding “the rule of
relative advantage” within which higher SES victims receive more help following a disaster than do lower SES victims. Weaker social resources are linked to emotional, mental, and physical distress over time (e.g., Bailis et al., 2001, Ensel & Lin 1991). Thus, future research would benefit from expanding the model include a larger resource bank the combines both the psychological and social dimensions of resources. Similarly, understanding the relationship between personal control and similar constructs, such as locus of control and self-efficacy, may be necessary from a measurement perspective to construct a valid resource bank.

Third, a recent and growing interest has emerged surrounding the topic of resilience in organizations (e.g., Sutcliffe & Vogus, 2003). Interesting would be an exploration of the results for individuals in our study whose trajectories were inconsistent with the average pattern of results – for example, those still able to thrive despite their lower SES positions. Future research would benefit from understanding the moderating conditions that promote resilience in the midst of hardship, whether they are personal traits, such as proactive personality, or situational conditions, such as supportive climates. Of particular practical relevance will be explicating pathways for reversing the negative cycles and capitalizing on positive cycles.

Fourth, in the present study, we used three widely-accepted indicators of SES. Future research should consider enhancing the SES construct by considering additional indicators, such as race and gender, and multiple levels of analysis, such as household and neighbourhood SES (Krieger et al., 1997). From an organizational perspective, future
research would benefit from considering intra-organization markers of status, such as salary, office perks, and job titles. A related question that requires empirical attention is whether intra-organization health differentials derive from intra-organization status distinctions, which would differentiate between individuals with higher and lower organizational status within a group of individuals who may have similar SES. Given that organizational status may be more malleable than SES, addressing this question could also provide an opportunity for researchers to explore changes in organizational status and its subsequent relationship with personal control, work stressors, and health.

Next, understanding the nature and form of the work stressors, personal control, and health trajectories would be of conceptual and empirical significance. The model in this study was tested over a relatively short amount of time with only three measurement occurrences, and thus the findings should be interpreted cautiously. Further data are needed to determine how the dynamic relationships manifest over a prolonged period of time, for example, intensifying trajectories cannot continue indefinitely, and should become more gradual over time or as levels become more extreme. Such patterns could be captured using LCM analyses of data over a longer timeframe with a greater number of measurement occasions. This research will be necessary if we are to understand how and when these trajectories terminate, which is an issue that is unexplored in our study but requires theoretical and empirical attention.

A longer time frame would not only provide an opportunity to study the functional form of change, but could also allow for tests of reverse causality and the
inclusion of feedback loops in the model. For example, if individuals report increasingly more health problems, then they may be more apt to miss or withdraw from work, jeopardizing their SES positions. Accordingly, health problems may be associated with a decline in SES, consistent with the “social drift” hypothesis (e.g., Mulatu & Schooler, 2002).

Last, the data used in this study were based solely on self-reports. While threats to mono-method bias are minimized because of the three-wave longitudinal study, the results remain to be replicated using multi-source data. For example, medical records may provide a better approximation of physical health than self-reports, which could include more specific health risks of chronic work stressors, such as new instances of heart disease, and have been used in related research (e.g., Kivimäki et al., 2005). Likewise, this study focused on one limited subset of health problems, those requiring medical attention. A more comprehensive test of the model would include less severe health problems as well.
1 In this paper, unless otherwise stated we use the term “work stressors” to refer to perceived, experienced, or subjective accounts of stressors present in the workplace.
2.5 References


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Chapter 3
Manuscript 2: Beyond Status: Status Inequality and Performance, Health, and Thriving in Teams

Abstract

Status structures are abundant in organizations, yet largely ignored in organizational research. We offer a conceptualization of status inequality, or the extent to which status positions on a team are dispersed. Status inequality is hypothesized to be negatively related to performance and physical health at the individual- and team-levels, and to individual thriving across time. We also consider potential moderating and mediating effects of these relationships. Analyses using random coefficient modeling largely support our hypotheses in a sample of National Basketball Association players and teams across six time points from 2000 to 2005.
3.1 Theoretical Development

The organizational literature is beginning to affirm the role of status in explaining seemingly divergent areas of research. Occupational health psychology recognizes status as a contributor to health disparities (e.g., Marmot, 2004). Status theories have been used to predict individual-level behaviors such as engagement in deviance (Aquino, Galperin, & Bennett, 2004) and the use of revenge responses to these normative violations (Aquino, Tripp, & Bies, 2001). Similarly, threats to status may be a more accurate explanation for sex-based harassment than sexual desire or dominance (Berdahl, 2007).

At the unit-level, status differentials shape expectations, patterns of influence, collaboration, and performance in team settings (Bunderson, 2003; Sheldon, Thomas-Hunt, & Proell, 2006) along with strategies for team design (Perretti & Negro, 2006). Finally, status accounts for attitudes toward diversity (Chatman & O’Reilly, 2004), and for the effects of diversity on innovation (Van der Vegt, Van de Vliert, & Huang, 2005), and pay and performance (Joshi, Liao, & Jackson, 2006).

That status is securing a place in organizational theorizing is not surprising. Status is a primary motivation (Barrick, Stewart, & Piotrowski, 2002; Buss, 1999), core to a person’s self-worth and social esteem (Berdahl, 2007), and organizations are an abundant source of status information (Pfeffer, 1998). Combine the former and the latter, and status becomes a powerful lens through which to study human behavior in organizational settings. However, despite its ubiquitous presence, rarely is status itself the focal point of
organizational research (Ravlin & Thomas, 2005; for an exception at the organizational-level, see Washington & Zajac, 2005). By contrast, status has a long standing in the sociological tradition where status organizing processes and status structures in small groups have attracted particular attention. Responding to recent calls (Pearce, 2001; Ravlin & Thomas, 2005), our research brings this focus on status structures in small groups to the organizational literature, and in doing so we aim to make a number of advances.

First, we offer a conceptualization of status hierarchies in team settings. Status positions exist within a distribution or hierarchy that defines them (e.g., Berdahl, 2007), however, most organizational research accounts for effects of an individual’s status only. Status structures convey meaning – individuals can learn a great deal about their value and relationship to others on a team by observing its status structure (Dutton, 2003; Pfeffer, 1998). In particular, we suggest that the inequality of a team’s status distribution is a meaningful dimension on which teams vary, and provide a definition of status inequality. Drawing on stratification theories, we explore the way in which the inequality of status positions on a team shapes both individual and team outcomes. Specifically, we suggest that teams showing greater status inequality will have members who feel socially and psychologically alienated from one another, which affects performance and physical health on the team, particularly for lower status members.

Second, our approach complements previous uses of status theories by clarifying the effects of team composition on team processes and outcomes. Based on status
characteristics theory (e.g., Berger, 1977; Berger, Rosenholtz, & Zelditch, 1980; Ridgeway & Walker, 1995), Van der Vegt et al. (2005) argue that demographic attributes can represent status, which explains why demographic diversity influences processes such as information sharing and collaboration. Specifically, lower status members of demographically diverse units may be given fewer opportunities to input their knowledge and ideas, diminishing collective innovation overall. Compensation research suggests that the effects of a team’s pay distribution on individual and team outcomes may be understood from a status perspective, where “the lower one is in the distribution, the lower the prestige, status, and economic benefits conferred by pay” (Bloom, 1999, 27). Clearly, status composition has been deemed an important means of understanding team behavior; however, previous research has been speculative and has not attempted to study status distributions directly. Thus, our paper clarifies these discussions by conceptualizing and measuring status directly, and by explicitly specifying the distributional form of status composition for which our predictions are expected to hold.

The remainder of our paper is organized as follows. We begin by providing a definition of status inequality, and place it in the larger context of stratification theories. We next discuss the effects of status inequality; we suggest that status inequality is a representation of social distance, where greater levels jeopardize two important concerns of organizations, namely employee performance and physical health. We also argue that greater status inequality is a source of self-oriented motivation that may direct individual effort away from team goals, and we consider the mediating effects of self-oriented team
behavior. Our final hypotheses outline the predicted relationship between status inequality and individual thriving over time, and we test our hypotheses empirically in a study of National Basketball Association (NBA) players and teams across a six-year period.

Conceptual Background and Hypotheses

Common to all status-based approaches is the implicit interpretation of status as a relationship between individuals in a social structure. Whether characterized by performance expectations (e.g., Berger et al., 1980), attributions of prestige (Perretti & Negro, 2006), or unearned privileges (Washington & Zajac, 2005), status is foremost a relative construct. Unlike an individual’s reputation, for example, status cannot be defined as an isolated, individual attribute. Instead, status is a “positional or relational element of a social structure” (Washington & Zajac, 2005: 282). More specifically, status represents an individual’s social standing or rank-order among others within a social system based on prestige, prominence, and respect (Ridgeway & Walker, 1995). Therefore, status relates each individual to all others within the social system. We believe that recognizing status as an individual’s place in an ordered distribution is fundamental to understanding how status influences team processes and outcomes. Specifically, because status within a group can be defined by the relative space between group members, we suggest that status differentials, and therefore the status distribution of a team overall, provides a meaningful approach to understanding how status operates in team settings.
We define status inequality as the extent to which status positions within a distribution are dispersed. Therefore, a team’s degree of status inequality captures the overall pattern of status differentials among members of a team. The study of status distributions and inequality is not new. In particular, sociologists routinely characterize societies by the extent to which they are stratified, where stratification is defined as hierarchically organized social inequality (Morris & Scott, 1996). While we draw on stratification and social inequality frameworks to make theoretical predictions about status distributions in team settings, the distinction between our conceptualization of status inequality and the notion of stratification more generally is notable. While both are defined by the structural order of status positions in a hierarchy, stratification is typically rooted in the struggles between distinct social classes marked by limited mobility (Scott, 1994). In contrast, our focus is on the micro team structure and the relative differences in status between members of a group whom might reasonably belong to the same social class or strata of society and where mobility is much more likely. To further refine this distinction, note that status in teams and organizations is often contextually-bound. For instance, in a study of work at Disneyland, Van Mannen (1991) found that the employees were from similar affluence and ethnic backgrounds, yet status inequalities based on job duties, autonomy, and even skirt length were prevalent.

**Status Inequality and Performance**

Status inequality is foremost a measure of social distance. Sociologists have long since recognized that inequality represents not only relative advantage and prestige, but a
structure of relationships within a social system (e.g., Laumann & Gutman, 1966). In fact, more recent approaches conceptualize status inequalities by the social space that distances individuals from one another (Bottero & Prandy; 2003; Prandy, 1999). The resulting tendency is for individuals to feel detached from more distant others (Chattopadhyay, 1999; Tsui & O’Reilly 1989), particularly on comparisons of status, which are core to perceptions of the self (Locke, 2003; 2005). Therefore, teams with greater status inequality are also likely to be those with more loosely integrated members, which can undermine collaboration efforts, and ultimately individual and team performance.

Indirect evidence supports the above assertion. Individuals who feel alienated have lower performance (e.g., Pearce & Randel, 2004), and to the extent that team performance combines individual interdependencies, it is also affected by social distance. Behavioral disintegration within teams, defined as the “diminishment of interaction, exchange, and collective effort” has been linked to team demographic diversity (Li & Hambrick, 2005: 795), and to worsened team performance (Carmeli & Schaubroeck, 2006). Research on compensation structures has found that individual and team performance suffers as a function of more stratified pay systems (Bloom, 1999; Cowherd & Levine, 1992; Shaw et al., 2002) in settings where group cohesion is contextually important to performance (Bloom, 1999; Frank, 1999, Shaw et al., 2002). Finally, Van der Vegt et al. (2005) found evidence consistent with a status-based approach, where demographic diversity (which was viewed as status-laden) was negatively related to
innovative climate, but only when status differentials were a likely source of social
distance (i.e., in high power-distance contexts).

Hypothesis 1a. Greater status inequality on a team will be negatively associated
with individual performance.

Hypothesis 1b. Greater status inequality on a team will be negatively associated
with team performance.

However, status theories often recognize the benefits of high status positions.
Status characteristics theory argues that high status is attributed to those group members
who are expected to perform well, and thus high status individuals receive more
opportunities to contribute to task deliberation and decision-making than do low status
individuals (e.g., Belliveau, O’Reilly, Wade, 1996; Driskell & Mullen, 1990). Similarly,
high status group members are accorded more attention from the group – perhaps the
usefulness of their opinions is often overshadowed by their status positions (Weisband,
Schneider, & Connolly, 1995). The fact that the attention derives not only from others
with high status, but from all members of the group is noteworthy, given that both high
and low status group members prefer to interact with those of higher status (Perretti &
Negro, 2006). This social power afforded to high status group members is likely to
positively influence approach-related behaviors that can enhance performance; inhibitive-
related behaviors may result from the low social power of lower status group members
(Ketlner, Gruenfeld, & Anderson, 2003). Not surprisingly, to protect these advantages,
high status members tend to avoid close association with lower status members (Perretti
& Negro, 2006), resulting in downward discrimination (Wilkinson, 2005). Accordingly, under conditions of greater status inequality, social distance should be maximized for lower status team members and thus negatively affect their performance more so than that of high status team members.

**Hypothesis 1c. The negative association between greater status inequality and individual performance will be stronger for individuals in lower status positions.**

**Status Inequality and Absences**

Apart from its effects on outcomes traditionally explored in a team context, we propose that by structuring social distance, status inequality also influences absences from work due to physical ill-health. Socially integrated individuals are healthier than their disintegrated counterparts who feel a sense of detachment and distress (Seeman, 1996; 2000; Uchino, 2004), which can interfere with neuroendocrine, cardiovascular, and immune bodily functions (Cohen, 2004). Wilkinson (2005) suggests that the social distance maintained by income inequality affects health by way of negative emotional responses and relational withdrawal behaviors. Status inequality may also influence health by altering perceptions of social support that help to alleviate stress (e.g., Karasek & Theorell, 1990), and through the onset of negative, stress-producing interactions (Cacioppo et al., 2002; Cohen, 2004; Rook, 1984). While we are unaware of any small group research that specifically addresses issues of within-team status inequality or social distance and health, evidence suggests that these findings are generalizable to organizational settings. In a review, Heaphy and Dutton (2008) found strong support for
the association between positive workplace interactions and physical health, even though workplace interactions can be short-lived and transient compared with many of the interactions that individuals have in non-work settings. One way that physical ill-health manifests itself is in withdrawal behaviors such as absenteeism (Johns, 2007), consequently:

Hypothesis 2a. Greater status inequality on a team will be positively associated with individual absences from work due to physical ill-health.

We propose a similar relationship between status inequality and team-level health. A close connection is likely between collective health and structural properties of a collective such as status inequality. While perhaps less familiar to organizational studies, epidemiologists routinely conceptualize health at the collective level, where it is most often measured as an aggregate of individual health within a given population and can include mean, distributional, and trend components (Pinto-Prades & Abellán-Perpiñán, 2005; Reidpath, 2005). Evidence from epidemiology suggests that stratified collectives are characterized by social distance and are less healthy than more egalitarian collectives (Wilkinson, 2005). For instance, epidemiologists have demonstrated a link between income inequality, which may be best explained by status differentials (Wilkinson, 2005), and population health, with social capital as a prominent intervening variable (e.g., Kawachi, Kennedy, Lochner, Prothrow-Stith, 1997).

Hypothesis 2b. Greater status inequality on a team will be positively associated with team absences from work due to physical ill-health.
Despite these influences, higher status individuals are more likely to be protected from the social harms of status inequality. In general, low status individuals tend to experience less favorable health conditions than high status individuals (e.g., see Marmot, 2004 for a review). Even in the most prestigious of social classes relative status is related to health. For example, Redelmeier and Singh (2001) found that Academy Award winners live approximately four years longer than those who are nominated but never win the award. Marmot (2004) argues that these health disparities can be accounted for in part by the inability of lower status individuals to fully connect with others socially, a notion consistent with our argument here.

**Hypothesis 2c.** The positive association between greater status inequality and individual absences from work due to physical ill-health will be stronger for individuals in lower status positions.

**Status Inequality and Self-Oriented Patterns of Interaction**

In the following sections we begin to explore the potential mechanisms by which status inequality operates in teams and influences team outcomes. Status structures organize social relationships and patterns of interaction, shaping what is attended to and salient in a given context (Baron & Pfeffer, 1994; Benjamin & Podolny, 1999). As status inequality within a team increases, status itself achieves greater relevance and importance to the team, which is why personal attributes or characteristics are less likely to derive status value when team members hold them equally (e.g., Bunderson, 2003). For example, when all group members have a university education, it is an unlikely source of
social power, whereas the reverse may be true when university education is concentrated in few members. The motivation to achieve higher status is then stronger within teams of greater status inequality because status is both more salient and valuable in these contexts. However, status striving is a self-focused pursuit, where emphasis is placed on individual advancement irrespective of collective interests (Huberman et al., 2004; Loch, Huberman, & Stout, 2000; Loch, Yaziji, & Langen, 2001), especially when individuals feel socially distanced from their teammates (i.e., under greater status inequality).

Overall, this self-oriented motivation is reflected in the patterns of behavior on a team, as individuals jockey for position and compete for status.

This logic is consistent with tournament theories of compensation, which are thought to evoke self-focused motivation. In tournament structures, pay across organizational positions is dispersed, so that as movement toward higher-level positions occurs, pay spreads widen and the positions become scarce (e.g., Lazear & Rosen, 1981; Rosen, 1986). Therefore, in the same way that status becomes a prominent source of motivation as status inequality increases, an incentive to achieve higher compensation arises under conditions of greater pay dispersion. Empirical support has been found for the basic tenet of tournament theory – that widening pay spreads will motivate individual effort and optimize performance (see Devaro, 2006). However, because individuals advance according to relative or ranked performance (Lazear & Rosen, 1981), like status inequalities, tournaments are a source of pro-self, not pro-social, motivation (De Dreu, 2007). Lazear and Rosen (1981) refer to the tournament structure as a “competition”
between “rivals”, such that prizes can be won based on both personal merit and the downfall of others. In some cases, individuals sabotage or undermine others to ensure that they are not eliminated from the tournament (Lazear, 1989). These self-focused behaviors are likely to be condoned when inequality is higher and individuals feel psychologically and socially distant from one another.

When taken together, these behaviors between team members are reflected by an overall pattern of self-oriented interaction on the team. Of course, it is possible that individuals will differ in their motivation to engage in self-oriented efforts across contexts; Lazear (1989) suggests that those higher in the status hierarchy may compete for advancement hardest and perhaps the most brutally. However, Loch et al. (2001) describe how the status striving of a single individual disrupted the motivation and relationships of an entire office. In team settings, if even a minority of members is self-focused, the pattern of interactions on the team will reflect those motivations because interactions on a team are by nature interdependent.

**Hypothesis 3. Greater status inequality will be positively associated with self-oriented team behavior.**

**Self-Oriented Team Behavior as a Mediator**

By extension, we propose that self-oriented team behavior will mediate the status inequality – performance and status inequality – health relationships for individuals and teams. Above we describe how status inequality prompts motivation and efforts toward status striving. However, when self-orientation occurs in a team context requiring
interdependence, performance suffers (e.g., De Dreu, 2007; Shaw et al., 2002). Performance within teams often requires team members to collaborate and combine their efforts to be successful, which is better facilitated by a collective orientation. Having a team-oriented rather than an individualistic, career-focused basis for commitment predicts performance through high quality workplace relations (Ellemers, de Gilder, & van de Heuvel, 1998). Generally, working in the interest of the collective creates communal social capital through which performance, especially citizenship, results (Bolino, Turnley, & Bloodgood, 2002; Ibarra, Kilduff, & Tsai, 2005). Researchers studying compensation argue that the disharmony and competition created by pay inequalities may be the reason that tournament structures decrease both individual and team performance in settings where work is interdependent (e.g., Bloom, 1999; Cowherd & Levine, 1992; Shaw et al., 2002). Thus, while individuals are motivated to achieve higher levels of status in stratified hierarchies, by directing their efforts toward within-group competition, the potential of the team to advance the performance of all members and to become more than the sum of its parts is lost.

Hypothesis 4a. **Self-oriented team behavior will mediate the negative association between status inequality and individual performance.**

Hypothesis 4b. **Self-oriented team behavior will mediate the negative association between status inequality and team performance.**

The isolating effects of self-oriented team behavior should have a similar effect on individual and team physical health. Competitive strategies such as politicking and
undermining have been shown to be destructive to employee health in organizations (e.g., Cropanzano, Howes, Grandey, & Toth, 1997; Duffy et al., 2002; Harris & Kacmar, 2005). In contrast, community connectedness and social capital is health enhancing (Putnam, 2000). One explanation for these findings is that when members of a collective do not share congruent goals (i.e., between the self and the collective), they do not develop the social support systems that occur naturally in cohesive collectives, and help to protect the health of collective members.

Hypothesis 4c. Self-oriented team behavior will mediate the positive association between status inequality and individual absences from work due to physical ill-health.

Hypothesis 4d. Self-oriented team behavior will mediate the positive association between status inequality and team absences from work due to physical ill-health.

Status Inequality and Individual Thriving

Last, we extend our model to consider the temporal nature of individuals’ experiences within team contexts. In particular, we propose that status inequality will influence individuals’ abilities to thrive – to do well and prosper over time. Social context has been identified as an important determinant of an individual’s thriving (e.g., Sheldon & Krieger, 2007; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Spreitzer et al. (2005) introduced a “socially-embedded” theory of thriving, suggesting that work environments founded on high quality relationships and social support allow individuals to experience vitality and learning on the job. Spreitzer et al. argue that a respectful climate is one mechanism that enables individuals to become active agents of their own
experience. Recent empirical evidence confirms that when a context is characterized by heightened social resources, individuals are more likely to be agentic and to thrive (Spreitzer, 2007). The importance of social connectedness to thriving comes from self-determination theory, which posits that individuals will optimize well-being and growth when they meet three primary needs: autonomy, competence, and connection to others (Deci & Ryan, 2000). Accordingly, we argue that greater status inequality impedes individual thriving by limiting the extent to which individuals feel similar, connected, and socially integrated, and enhancing their experiences of social distance. To the extent that status inequality creates a tournament structure of motivation, it will also thwart collaboration and the adoption of collective goals, which are posited to foster growth and development (Spreitzer et al., 2005). Importantly, this relationship should be strongest for low status players who feel the isolation of greater status inequality more acutely.

Thriving experiences are about energy and learning; they build over time and represent progress toward a goal or feelings of positive well-being (Spreitzer et al., 2005). We consider thriving in two ways. We argue that thriving can be captured both by individuals' performance and health across time. Performance trajectories can capture the extent to which individuals are learning and developing their talents, and are progressing through their careers. Performance is likely to suffer when individuals lack excitement and energy (e.g., Quinn & Dutton, 2005). Likewise, health patterns are often used to represent physical thriving, where health trajectories capture how well individuals confront and adapt to stressors (Epel, McEwen, & Ickovics, 1998). This
conceptualization is similar to that of Sheldon and Krieger (2007), who used both performance and well-being to measure individual thriving in a longitudinal study of law students.

**Hypothesis 5a.** Greater status inequality on a team will be negatively associated with individual performance thriving over time, particularly for individuals in lower status positions.

**Hypothesis 5b.** Greater status inequality on a team will be negatively associated with individual physical health thriving over time, particularly for individuals in lower status positions.

3.2 Methods

*Setting and Data Source*

We used data from the NBA to test the hypotheses. Organizational research has advocated the use of sport contexts to study organizational phenomena (Wolfe et al., 2005), and in the present study professional basketball provided a rich empirical context for a number of reasons. First, performance is characterized by individual and team components. Second, clear and obvious boundaries exist that separate individuals into teams, and differentiate those teams from other functional areas in the organization. Thus, the team represents a logical unit in which to define social structure, avoiding cross-memberships that may be more common in other types of organizations. Third, while players on professional sports teams by no means constitute the entire organization,
studying them does allow for a type of cross-organization analysis, allowing for greater
generalizability. Fourth, because professional sports take place in the public realm, a
wealth of complete individual- and team-level data are publicly recorded and available.
Finally, performance is (to some extent) objectively indicated, which makes it conducive
to research.

The primary data were acquired from STATS, a leading source of statistical
information and analysis of sports leagues in the United States. We supplemented this
dataset with award records from the *Official NBA Guide* (Carter & Hareas, 2001; Carter
We collected data across the six recent basketball seasons, 2000/2001 to 2005/2006,
which occurred after a major NBA lockout that ended in 1999. The sample included all
30 NBA teams in each of the six league seasons, resulting in a total of 176 team
observations. Following past research (Trevor, Gerhart, & Reilly, 2006), we enhanced the
reliability of our measures by including only those players who played in at least 20 of
the 82 games in a given season, which provided 2280 individual-level data points from
635 players across the six sample years.

*Measures*

*Status and Status Inequality.* To develop a measure of status inequality, we first
needed to measure the status of each player on a team. Status is contextually embedded,
meaning that understanding its constitution requires knowledge of the research setting, in
this case the NBA, and what might be pertinent indicators of status in that setting
(Bunderson, 2003; Cohen & Zhou, 1991). Working from our original definition of status as a ranking based on prominence, prestige, and respect, we identified and measured five indicators of status for NBA players in a given season: salary, games started, tenure, awards/recognitions, and celebrity status.

First, the extravagance of player salaries in professional sports receives a great deal of public attention and scrutiny. In fact, many have criticized players for becoming too focused on money and abandoning their original intrinsic motivation for playing the game (e.g., Pierce, Thomsen, & McCallum, 2005; Rosenberg, 2007). Further facilitating the salience of salaries is that they are publicly disclosed and thus can be compared directly within and across teams. Players are not only aware of their position in their team’s or the league’s payroll, but can be sure that anyone who wishes so can also gain salary information; it would be common for NBA fans to know the salaries of popular players. Accordingly, salary is a source of prominence for players, and because final salaries are negotiated individually, they also indicate respect from a team’s franchise and management who make payroll decisions.

The second indicator used to measure status was the number of games that a player started in a given season. During the course of play, five players participate in a basketball game at any one time; however, there are a total of twelve active players on a team. Players are distinguished as regular starters (designated to start each game) versus non-starters (playing with greater irregularity when the starters for their positions are not playing). Starters are afforded higher performance expectations and are likely to receive
greater recognition by a number of salient constituent groups, including owners, coaches, teammates, rival teams, the media, and fans, making games started a relevant indicator of player prominence. Likewise, a player’s designation as a starter is an indicator of his talent as perceived by organizational decision-makers, and thus signals that the player is in a respected position on the team.

Third, organizational tenure is often considered a marker of individual status, where individuals with longer tenure are more likely to be in positions of greater social power (Mehra, Kilduff, & Brass, 2001) and to carry valuable informal knowledge about a job or an organization (Rollag, 2004). A player’s tenure is consequential in professional sports because of high turnover rates, in which after spending very few seasons in the league, players may be forced to retire (Hoffer, 2006; Witnauer, Saint Onge, & Rogers, 2008). Similarly, players’ skills and abilities decline with age forcing the exit of older players (Groothuis & Hill, 2004). However, while older players do typically show a decline in performance (Berri, Schmidt, & Brook, 2006), they also bring a necessary wisdom to the game (e.g., Sabino, 2005) and are accredited with a ‘mental toughness’ underdeveloped in less tenured players (Wolff, 2001). NBA salary schedules, which award longer-tenured players with higher minimum salaries, attest to the respect given to these players. Accordingly, longer tenured players are those who have been successful in the sport and therefore garner the respect of others. Thus, we used tenure in the league as an indicator of status.
Next, the awards and recognitions that players receive denote prestige from a variety of sources (Perretti & Negro, 2006). External, experienced constituents and judges of the game, specifically sportswriters, broadcasters, and fans are responsible for choosing the winners of a number of awards and honours presented to players throughout the course of the season (i.e., all-star game selections and awards, player of the week awards, and player of the month awards), and at the end of the season (i.e., most valuable player, rookie of the year, defensive player the year, sixth-man award, most improved player, sportsmanship award, citizenship award, all NBA team selections, all NBA rookie team selections, and all NBA defensive team selections). In total, there were as many as 140 of these honors awarded in each of the basketball seasons in our sample. However, awards differ in level of prestige (i.e., being deemed the league’s most valuable player for a season is more prestigious than receiving a player of the week award); thus to create a measure of total player awards, we attributed greater weight to major awards (as defined by the *Official NBA Guide*), and distinguished between medium and minor awards (i.e., those awarded to players at an end of the season ceremony versus player of the week and month awards). Specifically, in a given season, players were given 1 point for all minor awards won (e.g., player of the week award), 2 points for all medium level awards won (e.g., an all-NBA team selection), and 3 points for major awards won (e.g., most valuable player). We created a measure of total awards by summing a player’s points in each category.
Last, being a player on a professional sports team is a public occupation, which can result in fame for some. Critics have suggested that the quest for super stardom has become an overly dominant concern of NBA players. Although attaining celebrity status is unlikely to be equally desired, those who garner media attention are more likely to be attended to within the organization, particularly because external popularity or “star power” is significantly related to fan attendance and gate revenues both for home and away games (Berri et al., 2006). Therefore, a central indicator of an NBA player’s prominence, and thus status, is his level of celebrity. To proxy a player’s celebrity, we tabulated the number of different articles mentioning the player’s name in *Sports Illustrated* magazine for a given season. *Sports Illustrated* is a weekly American sports magazine covering both professional and amateur sport with a readership of as many as 23 million people per week. A similar procedure for ascribing attention from media reports to public figures has been used in past studies of organizations (e.g., Hayward & Hambrick, 1997).

We verified the relevance of these status indicators by surveying 11 prominent North American sportswriters for the NBA. All but one of the journalists were male, and their experience as sportswriters for the NBA ranged from one to 35 years. The participants were given the definition of status used in this study and asked to rate on a scale from 1 ("Not well at all") to 5 ("Extremely well") how well each of the status indicators discussed represents status in the NBA (participants were also given the option to select that they “Don’t know”). The mean ratings for each of the indicators are as
follows: salary ($M = 4.55, SD = .82$), games started ($M = 3.82, SD = .60$), tenure ($M = 3.40, SD = .97$), awards ($M = 4.64, SD = .51$), and celebrity ($M = 4.36, SD = .67$); and for the indicators amalgamated: ($M = 4.13, SD = .38$). The participants strongly agreed on their overall status ratings ($r_{wg} = .93$).

The five status indicators were used to create an overall measure of status for each player observation in the sample. We followed past field research in adapting Berger’s (1977) methods for creating status composites in simulation studies (e.g., Berger & Fisek, 2006) to a field setting (Bunderson, 2003). A player’s score for each status indicator was first divided by the team maximum value of the indicator (e.g., $S_A / \text{max}_{team \_\text{SALARY}}$). This procedure determined the status indicator strength for each player observation, ranging from a minimum of 0 to a maximum of 1. The status indicators were then combined into a single status score using the formula below, which reflects the notion that as the number of status indicators accounted for increases, each indicator provides little additional unique information about a player’s status. This attenuation principle is an underlying tenet of status characteristics theory (Berger, 1977). Last, consistent with the definition of status as a position in an ordered distribution, we placed the scores on a scale from 0 to 1 by dividing a player’s status score by the maximum score for his team (Bunderson, 2003).

$$SS_{i,k} = \frac{\left[1 - (1 - s(SALARY_{i,k}))^* (1 - s(STARTS_{i,k}))^* (1 - s(TENURE_{i,k}))^* (1 - s(AWARDS_{i,k}))^* (1 - s(CELEBS_{i,k}))\right]}{SS_{\text{team max},k}}.$$
where $SS_{i,k}$ is the status score for player observation $i$, $s(SALARY_{i,k})$ is the status indicator strength of player observation $i$’s salary, $s(STARTS_{i,k})$ is the status indicator strength for the number of games started by player observation $i$, $s(TENURE_{i,k})$ is the status indicator strength of player observation $i$’s tenure, $s(AWARDS_{i,k})$ is the status indicator strength for player observation $i$’s total awards, $s(CELEB_{i,k})$ is the status indicator strength for the celebrity status of player observation $i$, and $SS_{\text{team max},k}$ is the maximum status score on team $k$.

We operationalized status inequality using the Gini coefficient, a common metric of inequality used in organizational studies and more broadly (Harrison & Klein, 2007). The following formula defines the Gini coefficient:

$$G(SS)_k = \frac{\sum_{i=1}^{n} |SS_i - SS_j|}{2 * n^2 * SS_{\text{mean}}},$$

where $G(SS)_k$ is the Gini coefficient of status scores for team $k$, $SS_{\text{mean}}$ is the mean status score on team $k$, and $n$ is the total number of players on team $k$. The Gini coefficient represents the average status differential between all possible pairs of individuals in the population. It is valued between 0 and 1, where 0 represents perfect status equality and 1 represents perfect status inequality; thus teams with higher Gini coefficients have greater status inequality.

**Self-Oriented Team Behavior.** Three variables were used to measure self-oriented team behavior: missed field goals, non-scoring performance, and transgressions. Each of
these variables was first calculated for all player observations and then aggregated to the team-level.

Missed Field Goals and Non-Scoring Performance. Basketball is interdependent in nature and requires team members to work collaboratively to maximize team performance. However, for the most part players are rewarded (in terms of salary) based on individual performance, and more specifically on scoring performance (Berri et al., 2006; Harder, 1992). Therefore, players have an extrinsic motivation to increase their individual scoring performance irrespective of their team’s performance. Accordingly, self-oriented or selfish play (e.g., taking unsuccessful shots) can be differentiated from more collective-focused play (e.g., assists), which is less likely to be rewarded (Berri et al., 2006).

We used Harder (1992)’s measures of selfish and cooperative performance in the NBA (i.e., missed field goals and non-scoring performance) as individual self-oriented play metrics. First, the missed field goals statistic was calculated as the number of field goals attempted less the number of field goals made by a player. Harder (1992) argues that taking more shots, particularly those which are difficult and unsuccessful, is characteristic of economic self-interest; players concentrate on behaviors that are potentially rewarding for themselves at the expense of team performance. Conversely, non-scoring performance accounts for those behaviors that aid team performance overall but are less likely to bring a player personal recognition and reward (Berri et al., 2006).
Therefore, non-scoring performance is an inverse measure of self-oriented play. Below is the formula for non-scoring performance:

\[ NSP_i = \left[ REB_i + ASST_i + BLK_i + STL_i - (FGA_i - FGM_i) \right], \]

where \( NSP_i \) is the non-scoring performance for player observation \( i \), \( REB_i \) is number of rebounds made by player observation \( i \), \( ASST_i \) is the number of assists for player observation \( i \), \( BLK_i \) is the number of blocked shots by player observation \( i \), \( STL_i \) is the number of steals made by player observation \( i \), \( FGA_i \) is the number of fields goals attempted by player observation \( i \), and \( FGM_i \) is the number of field goals made by player observation \( i \).

Because playing time and position provide players with non-equivalent performance opportunities, we also adjusted missed field goals and non-scoring performance for the number of minutes played and the player’s position on the team (Berri et al., 2006).

We next averaged player-level missed fields and non-scoring performance for each team observation. Our contention is that self-oriented team behavior is reflected in the pattern of playing style on a team (i.e., a configural property of a team; Kozlowski & Klein, 2000); thus, we do not suggest that self-orientated behavior is a shared property of a team, at least in terms of the measures presented here. In fact, such an assumption would be implausible because performance on a basketball team is governed by the Law of Diminishing Returns – “There is only one ball! When Jordan has the ball, Pippen and Grant do not have the ball. So if you add Jordan, a certain number of shot attempts that
would go to Pippen and Grant, now go to Jordan” (Berri et al., 2006: 115). Thus, a team’s missed shots and non-scoring performance reflects the configuration of interaction patterns of players on a team, not a shared property. Finally, because some of the statistics included in these measures of team self-orientation were also used to measure player performance (see below), we excluded the focal player’s score from the team average when predicting individual-level performance (e.g. Glomb & Liao, 2003).

Transgressions. The final measure of self-oriented team behavior used was team transgressions. Transgressions included suspension from play (given for breaking a number of rules including physical contact restrictions, fighting, assaulting officials), disqualification from a game (the result of exceeding the maximum of fouls allowed in one game), flagrant fouls (given for excessive aggressive behavior not deemed malicious by officials; Kendall, 2008), and technical fouls (given most often for unsportsmanlike behavior, such as fighting and disrespecting officials or players). Transgressions reflect unproductive and non-instrumental team behavior. Unlike most personal fouls, which also penalize players for breaking rules, transgressions are not the result of strategic play or a focus on team-oriented outcomes; they are inconsistent with team goals. Kendall (2008), however, argues that players may perceive transgressions to be a source of publicity and external popularity, ultimately heightening their status in the league. This is likely because transgressions give players media and fan attention. Therefore, transgressions are an appropriate proxy for self-orientated playing style; they represent a tendency for players to focus on themselves to the detriment of their teammates and team.
A recent public apology made by a suspended NBA player illustrates these effects; he stated “I apologize to my teammates, our fans, our ownership and the N.B.A. for the negativity this has created and the poor example that I set” (The Associated Press, 2007). Individual-level transgressions were adjusted for playing time and position and summed to create a player-level measure of transgressions, which was then averaged across players from each team observation to create the final measure of team-level transgressions.

*Dependent Variables.* We assessed player-level performance using a metric of player efficiency advocated by the NBA (Berri et al., 2006), which accounts for both positive and negative features of a player’s performance and is calculated as:

\[
PP_i = [POINTS_i + REB_i + ASST_i + BLK_i + STL_i - (FGA_i - FGM_i) - (FTA_i - FTM_i) - TURN_i],
\]

where \(PP_i\) is player observation \(i\)’s performance, \(POINTS_i\) is player observation \(i\)’s total points scored, \(FTA_i\) player observation \(i\)’s total free throw attempts, \(FTM_i\) is player observation \(i\)’s total free throws made, and \(TURN_i\) is the total turnovers made by player observation \(i\). For reasons stated previously, performance was adjusted for minutes played and player position.

We used a team’s winning percentage in a given season (i.e., \(WINS / GAMES PLAYED\)) to capture team performance. Winning percentage is both an indicator of how well players perform as a team and (indirectly) of financial gain, which
is directly related to the number of games a team wins during a season (Berri et al., 2006).

Individual-level physical health was measured using player absences due to injury or illness. Absenteeism is a common metric of wellness in health and well-being research. However, a critique of absenteeism as an approximation for health is that employees may miss time for reasons other than injury or illness. This is only a small threat in the present research because teams have access to their own private doctors who assess a player’s physical condition, and teams release the nature of the absence that causes a player to miss time. In the present study, we excluded those cases of absences due to reasons other than injury or illness. Further, given the demanding nature of the profession, injuries are commonplace in NBA basketball. Sports injuries obviously occur for physical and accidental reasons; however, strong evidence also shows that psychosocial factors, such as life stress, and relational factors, including social support, predict athletic injury (see Williams, 2001 for a review), which makes injuries an appropriate measure of player physical health in the current study. Likewise, absences due to illnesses are a direct measure of physical health symptoms. Absences were measured as the number of separate occurrences of games missed by a player during the season. Because players who receive more playing time are at greater risk for injury and those who are not expected to play in each game need not be officially absent when unable to play, we divided absences by the total number of games in which a player
appeared. Team-level absences were calculated as the total number of the adjusted player absences on a team.

*Control Variables.* The mean of an attribute (in this case status) is incorporated in the calculation of inequality measures. Therefore, without controlling for the mean level of status on a team, we would be unable to separate the effects of status inequality from those of mean team status (e.g., if a significant relationship was found between status inequality and performance, it could be caused by the effects of inequality, higher or lower mean status, or both). Accordingly, following the recommendations of past research, we controlled for a team’s mean status in all analyses (Harrison & Klein, 2007), which concurrently controlled for a team’s level of talent.

In addition, given past research showing a relationship between pay dispersion and performance, we isolated the effects of pay dispersion, and considered the relationship between status inequality and outcomes after controlling for its effects. We measured pay dispersion as the salary of the highest paid player divided by the salary of the lowest paid player.

In addition, we accounted for a number of other possible confounding variables. Performance and wellness are likely to decline with age, thus we controlled for player age in individual-level analyses and mean team age in team-level analysis. Past research has found that ethnicity predicts health and well-being, suggesting that ethnicity is a potential confounder and should be controlled (see Stanton, Revenson, & Tennen, 2007 for a review). In analyses of player absences, we controlled for the dominant position
played by an individual. Injuries are likely to interfere with player performance (Berri & Krautmann, 2006) and thus player absences (team absences) were included as covariates in individual-level (team-level) analyses. Likewise, team winning percentage controlled for the possibility that being on a winning or losing team may affect player performance (Bloom, 1999). Finally, past performance and absences are probable predictors of future performance and absenteeism, thus we controlled for performance and absences in the previous season in the respective individual analyses, and prior team performance and absences in team analyses.

3.3 Results

Analytic Strategy

The temporal nesting of our data implies that OLS regression is an unsuitable method in which to test our hypotheses because the data are likely to violate OLS’s assumption of independent observations. Accordingly, we conducted our analyses using random coefficient modeling in Mplus 5.1, which provides parameter estimates analogous to regression coefficients, but is appropriate for nested datasets. We first calculated interclass correlations (ICC) to determine the extent to which our dependent variables were clustered by team membership and across time. The ICC for individual performance nested within teams was .01, suggesting that team membership accounts for a very small portion of the variance in performance. Accounting for player performance across sample years, however, revealed that individual performance was correlated across time periods; ICC = .71, necessitating the use of multilevel modeling. A similar pattern
emerged for player absences, where observations were largely independent across team membership; ICC = .01, yet, strongly correlated across league seasons; ICC = .27. We repeated these analyses at the team-level finding that team performance was nested within sample years ICC = .39. The ICC for team-level absences was modest, .06, perhaps signifying that OLS regression would be an appropriate strategy, however, with a small number of level-2 units even marginal dependencies can bias the estimation of standard errors and therefore significance testing (Bickel, 2007).

Thus, we used a series of random coefficient equations that accounted for the nested observations of time periods (Level 1) within individuals (Level 2) when modeling individual-level outcomes, and time periods (Level 1) within teams (Level 2) for team-level analyses. Comparisons between models were made using the change in the -2 Log Likelihood statistic (LRχ^2), which follows a χ^2 distribution and indicates the relative fit of nested models (Singer & Willett, 2003). To allow for comparison of individual- and team-level results, and to help avoid problems of multicollinearity, we followed others (e.g, Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Ployhart, Weekley, & Baughman, 2006) in standardizing all measures, which simultaneously centered them on their sample means. Descriptive statistics are presented in Table 3-1^2.
### Table 3-1: Means, Standard Deviations, and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
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<tbody>
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<td><strong>Individual level</strong></td>
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<td>1. Age</td>
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<td>2. Ethnicity (African American=1; Other=0)</td>
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<td>.09</td>
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<td>3. Guard (Guard=1; Other=0)</td>
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<td>.50</td>
<td>.03</td>
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<td>4. Center (Center=1; Other=0)</td>
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<td>.35</td>
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<td>-.22</td>
<td>-.38</td>
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<tr>
<td>5. Prior Absences</td>
<td>.08</td>
<td>.15</td>
<td>-.08</td>
<td>-.07</td>
<td>-.07</td>
<td>.08</td>
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</tr>
<tr>
<td>6. Prior Performance</td>
<td>.42</td>
<td>.09</td>
<td>.02</td>
<td>.06</td>
<td>-.01</td>
<td>.01</td>
<td>-.20</td>
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<tr>
<td>7. Status</td>
<td>.60</td>
<td>.26</td>
<td>.28</td>
<td>.16</td>
<td>.01</td>
<td>.02</td>
<td>-.24</td>
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</tr>
<tr>
<td>8. Absences</td>
<td>.09</td>
<td>.15</td>
<td>.01</td>
<td>-.07</td>
<td>-.08</td>
<td>.09</td>
<td>.13</td>
<td>-.15</td>
<td>-.24</td>
<td></td>
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<tr>
<td>9. Performance</td>
<td>.42</td>
<td>.10</td>
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<td>.03</td>
<td>.01</td>
<td>.00</td>
<td>-.15</td>
<td>.76</td>
<td>.51</td>
<td>-.21</td>
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<td><strong>Team level</strong></td>
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<tr>
<td>1. Mean Age</td>
<td>26.81</td>
<td>1.57</td>
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<tr>
<td>2. Prior Team Absences</td>
<td>.89</td>
<td>.52</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. Prior Winning Percentage</td>
<td>.00</td>
<td>.29</td>
<td>.57</td>
<td>.00</td>
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<td></td>
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<tr>
<td>4. Mean Status</td>
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<td>.01</td>
<td>.06</td>
<td>-.06</td>
<td>-.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Missed Field Goals</td>
<td>1.08</td>
<td>.02</td>
<td>-.12</td>
<td>-.04</td>
<td>-.11</td>
<td>.21</td>
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<td></td>
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</tr>
<tr>
<td>6. Non-Scoring Performance</td>
<td>1.93</td>
<td>2.13</td>
<td>.23</td>
<td>-.17</td>
<td>.19</td>
<td>.03</td>
<td>-.40</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Transgressions</td>
<td>.56</td>
<td>.06</td>
<td>-.06</td>
<td>-.05</td>
<td>.09</td>
<td>.11</td>
<td>.03</td>
<td>.11</td>
<td></td>
<td></td>
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<tr>
<td>8. Status Inequality</td>
<td>.28</td>
<td>.05</td>
<td>-.08</td>
<td>.02</td>
<td>.11</td>
<td>-.79</td>
<td>.00</td>
<td>-.12</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>9. Team Absences</td>
<td>1.22</td>
<td>.69</td>
<td>.02</td>
<td>-.03</td>
<td>.06</td>
<td>-.02</td>
<td>.31</td>
<td>-.03</td>
<td>.11</td>
<td>.19</td>
</tr>
<tr>
<td>10. Winning Percentage</td>
<td>.01</td>
<td>.27</td>
<td>.55</td>
<td>-.15</td>
<td>.56</td>
<td>-.03</td>
<td>-.15</td>
<td>.46</td>
<td>.04</td>
<td>-.01</td>
</tr>
<tr>
<td>11. Pay dispersion</td>
<td>30.08</td>
<td>17.25</td>
<td>-.02</td>
<td>-.05</td>
<td>.13</td>
<td>-.49</td>
<td>-.13</td>
<td>.07</td>
<td>.05</td>
<td>.40</td>
</tr>
</tbody>
</table>
Note. N = 1584 individual observations in 143 team observations (listwise deletion). For the individual level correlations of .05 are significant at the $p < 0.05$ level. For the team level correlations of .16 are significant at the $p < 0.05$ level.
Hypothesis Tests

Hypothesis 1: Status Inequality – Performance Analyses. We expected that status inequality would be negatively associated with individual (Hypothesis 1a) and team (Hypothesis 1b) performance. Null models indicated significant random variation across the sample years in the performance intercepts at the individual and team levels and in the status inequality-performance slope components, and thus these random parameters were retained in further analyses (see Table 3-2 and Table 3-3 for models). After adding relevant control variables, status inequality was negatively related to individual performance (γ = -.06, p < .05). These findings support Hypothesis 1a. We did not, however, find a significant relationship between status inequality and performance at the team-level (γ = -.12, p = .68), and thus failed to support Hypothesis 1b.
Table 3-2: Random Coefficient Estimates for Individual-Level Main Effect, Moderation, and Mediation Analyses for Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>$\gamma$</td>
</tr>
<tr>
<td>Intercept</td>
<td>.08**</td>
</tr>
<tr>
<td>Age</td>
<td>-.24**</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.03</td>
</tr>
<tr>
<td>Absences</td>
<td>-.08**</td>
</tr>
<tr>
<td>Prior Performance</td>
<td>.61**</td>
</tr>
<tr>
<td>Winning Percentage</td>
<td>.09**</td>
</tr>
<tr>
<td>Pay Dispersion</td>
<td>-.01</td>
</tr>
<tr>
<td>Status</td>
<td>.26**</td>
</tr>
<tr>
<td>Mean Status</td>
<td>-.07*</td>
</tr>
<tr>
<td>Status Inequality (H1a)</td>
<td>-.06*</td>
</tr>
<tr>
<td>Status X Status Inequality (H1c)</td>
<td>.04~</td>
</tr>
<tr>
<td>Missed Field Goals (H4a)</td>
<td>.01</td>
</tr>
<tr>
<td>Non-Scoring Performance (H4a)</td>
<td>-.01</td>
</tr>
</tbody>
</table>

*Random Components*

| Level-1 Residual                              | .34**       | .03         | .34**       | .03         | .34**       | .03         | .34**       | .03         | .34**       | .03         |
| Level-2 Intercept                             | .01         | .03         | .01         | .03         | .01         | .03         | .01         | .03         | .01         | .03         |
| Random Slope (Status Inequality)             | .00         | .01         | .00         | .01         | .00         | .01         | .00         | .01         | .00         | .01         |
| Covariance (Intercept and Slope)             | .00         | .01         | .00         | .01         | .00         | .01         | .00         | .01         | .00         | .01         |

$\text{LR}_\chi^2$ test

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1172.52**</td>
</tr>
</tbody>
</table>

117
Note. LR$\chi^2$ is the change in the -2 Log Likelihood statistic across models. Model 1 was compared to the null model; Models 2 through 5 were compared to Model 1.

$\sim p < .10.$

* $p < .05.$

** $p < .01.$
Table 3-3: *Random Coefficient Estimates for Team-Level Main Effect and Mediator Analyses for Performance*

<table>
<thead>
<tr>
<th>Variable Including Random Components</th>
<th>Model 1</th>
<th>(\gamma)</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.01</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>Mean Age</td>
<td>.46**</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>Team Absences</td>
<td>.04</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Prior Winning Percentage</td>
<td>.07</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>Pay Dispersion</td>
<td>.00</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>Mean Status</td>
<td>-.09</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>Status Inequality (H1b)</td>
<td>-.05</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

**Random Components**

<table>
<thead>
<tr>
<th></th>
<th>(\gamma)</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level-1 Residual</td>
<td>.38**</td>
<td>.06</td>
</tr>
<tr>
<td>Level-2 Intercept</td>
<td>.22*</td>
<td>.10</td>
</tr>
<tr>
<td>Random Status Inequality Slope</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>Covariance (Intercept and Slope)</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>LR(\chi^2) test</td>
<td>51.62**</td>
<td></td>
</tr>
</tbody>
</table>

* * \(p < .05\).
** ** \(p < .01\).
A stronger negative relationship between status inequality and performance for lower status individuals was also hypothesized (Hypothesis 1c). We tested this hypothesis by entering an interaction term between status inequality and status into the respective random coefficient analyses after controlling for the main effects of both variables. The interaction was marginally significant ($\gamma = .04, p = .06$). Probing the interaction (displayed in Figure 3-1) showed that for high status players, status inequality had minimal effects on performance, while the reverse was true for low status players. Table 3-2 displays these findings.

Figure 3-1: Effect of Status by Status Inequality on Individual Performance

---

Hypothesis 2: Status Inequality – Absences Analyses. Hypotheses 2a and 2b relate status inequality to individual- and team-level absences. Estimating the null models
for absences showed that the absences intercepts varied significantly across sample years at the individual- and team-level; however, the slope components (between status inequality and absences) did not, and thus were fixed in further analyses (see Table 3-4 and Table 3-5 for models). As can be seen in Table 3-4, status inequality was positively associated with individual-level absences beyond relevant control variables ($\gamma = .07, p < .05$) giving support to Hypothesis 2a. Similarly, a significant relationship was found between status inequality and team absences ($\gamma = .41, p < .01$), thus strongly supporting Hypothesis 2b. Next, we hypothesized a stronger positive relationship between status inequality and absences (Hypothesis 2c) for low status individuals, however, the interaction term was not significant ($\gamma = -.01, p = .79$). These findings fail to support Hypothesis 2c.
Table 3-4: Random Coefficient Estimates for Individual Level Main Effect, Moderation, and Mediation Analyses for Absences

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\gamma$</td>
<td>SE</td>
<td>$\gamma$</td>
<td>SE</td>
<td>$\gamma$</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.01</td>
<td>.03</td>
<td>-.01</td>
<td>.03</td>
<td>-.01</td>
</tr>
<tr>
<td>Age</td>
<td>.11**</td>
<td>.02</td>
<td>.11**</td>
<td>.02</td>
<td>.11**</td>
</tr>
<tr>
<td>Guard</td>
<td>-.05*</td>
<td>.03</td>
<td>-.05</td>
<td>.03</td>
<td>-.05</td>
</tr>
<tr>
<td>Center</td>
<td>.05</td>
<td>.04</td>
<td>.05</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.02</td>
<td>.03</td>
<td>.02</td>
<td>.03</td>
<td>.02</td>
</tr>
<tr>
<td>Prior Absences</td>
<td>-.04</td>
<td>.04</td>
<td>-.03</td>
<td>.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Pay Dispersion</td>
<td>-.02</td>
<td>.02</td>
<td>-.01</td>
<td>.02</td>
<td>-.02</td>
</tr>
<tr>
<td>Status</td>
<td>-.28**</td>
<td>.04</td>
<td>-.28**</td>
<td>.04</td>
<td>-.28**</td>
</tr>
<tr>
<td>Mean Status</td>
<td>.11**</td>
<td>.04</td>
<td>.09**</td>
<td>.03</td>
<td>.11**</td>
</tr>
<tr>
<td>Status Inequality (H2a)</td>
<td>.07*</td>
<td>.04</td>
<td>.05</td>
<td>.03</td>
<td>.07</td>
</tr>
<tr>
<td>Status X Status Inequality (H2c)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Missed Field Goals (H4c)</td>
<td>.05*</td>
<td>.02</td>
<td>-.03</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>Non-Scoring Performance (H4c)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Transgressions (H4c)</td>
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<td>-</td>
</tr>
</tbody>
</table>

**Random Components**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Level-1 Residual</td>
<td>.55**</td>
<td>.12</td>
<td>.55**</td>
<td>.12</td>
<td>.55**</td>
</tr>
<tr>
<td>Level-2 Intercept</td>
<td>.15*</td>
<td>.07</td>
<td>.14*</td>
<td>.07</td>
<td>.15*</td>
</tr>
<tr>
<td>Random Slope (Status Inequality)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Covariance (Intercept and Slope)</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>LR$\chi^2$ test</td>
<td>1211.49**</td>
<td>.07</td>
<td>7.16**</td>
<td>.70</td>
<td>.01</td>
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</table>

*Note. Model 1 was compared to the null model; Models 2 through 5 were compared to Model 1. Dashes reflect fixed parameters based on results of null model. * $p < .05$. ** $p < .01$.  

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Table 3-5: Random Coefficient Estimates for Team-Level Main Effect and Mediator Analyses for Absences

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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</thead>
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<td></td>
<td>$\gamma$</td>
<td>SE</td>
<td>$\gamma$</td>
<td>SE</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.00</td>
<td>0.09</td>
<td>0.00</td>
<td>0.08</td>
</tr>
<tr>
<td>Mean Age</td>
<td>-0.01</td>
<td>0.08</td>
<td>-0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>Prior Team Absences</td>
<td>-0.01</td>
<td>0.10</td>
<td>-0.01</td>
<td>0.09</td>
</tr>
<tr>
<td>Pay Dispersion</td>
<td>-0.13</td>
<td>0.10</td>
<td>-0.10</td>
<td>0.09</td>
</tr>
<tr>
<td>Mean Status</td>
<td>0.22</td>
<td>0.14</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td>Status Inequality (H2b)</td>
<td>0.41**</td>
<td>0.14</td>
<td>0.32*</td>
<td>0.14</td>
</tr>
<tr>
<td>Missed Field Goals (H4d)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Scoring Performance (H4d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgressions (H4d)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Random Components</td>
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<td></td>
</tr>
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<td>Level-1 Residual</td>
<td>0.88**</td>
<td>0.14</td>
<td>0.82**</td>
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</tr>
<tr>
<td>Level-2 Intercept</td>
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<td>0.08</td>
<td>0.03</td>
<td>0.06</td>
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<tr>
<td>Random Status Inequality Slope</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Covariance (Intercept and Slope)</td>
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<td>0.00</td>
<td>-0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>LR $\chi^2$ test</td>
<td>8.86</td>
<td>1.99</td>
<td>1.26</td>
<td>1.83</td>
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</tbody>
</table>

Note. Model 1 was compared to the null model; Models 2 through 6 were compared to Model 1. Dashes reflect fixed parameters based on results of null model.

* $p < .05$. ** $p < .01$. 

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Hypothesis 3: Status Inequality – Self-Oriented Team Behavior Analyses. In Hypothesis 3, we predicted that teams with greater status inequality would be more self-oriented than teams with lesser status inequality. Table 3-6 shows the results of our analysis; each of the self-oriented behavior variables was significantly related to status inequality in the predicted direction: missed field goals ($\gamma = .35, p < .01$), non-scoring performance ($\gamma = -.30, p < .05$), and transgressions ($\gamma = .26, p < .01$). We conducted additional analyses to further scrutinize this hypothesis. Missed free throw shots are similar to missed field goals in that they occur when a player misses a scoring opportunity; however, free throws are awarded to players following various violations by the opposing team. These shots are taken from a designated point on the basketball court and are unopposed, thus should not be an appropriate proxy for self-oriented playing style. Similarly, personal fouls, which penalize players for rule violations, differ both in frequency and strategic use from transgressions. Accordingly, we suggest that these similar behaviors are qualitatively different from the self-oriented play variables that we test in Hypothesis 4, and should not be related to status inequality. As expected missed team free throws and team personal fouls showed no significant relation to status inequality. Together these analyses support Hypothesis 3.
Table 3-6: Random Coefficient Estimates for Team Level Self-Oriented Play and Step 1 of Mediation Analyses

<table>
<thead>
<tr>
<th>Variable</th>
<th>Missed Field Goals</th>
<th>Non-Scoring Performance</th>
<th>Transgressions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\gamma$</td>
<td>$SE$</td>
<td>$\gamma$</td>
</tr>
<tr>
<td>Intercept</td>
<td>.01</td>
<td>.10</td>
<td>-.02</td>
</tr>
<tr>
<td>Mean Status</td>
<td>.43**</td>
<td>.13</td>
<td>-.21</td>
</tr>
<tr>
<td>Status Inequality (H3)</td>
<td>.35**</td>
<td>.12</td>
<td>-.30*</td>
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**Random Components**

<table>
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<tr>
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<th>$\gamma$</th>
<th>$SE$</th>
<th>$\gamma$</th>
<th>$SE$</th>
<th>$\gamma$</th>
<th>$SE$</th>
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</thead>
<tbody>
<tr>
<td>Level-1 Residual</td>
<td>.78**</td>
<td>.07</td>
<td>.75**</td>
<td>.09</td>
<td>.70**</td>
<td>.03</td>
</tr>
<tr>
<td>Level-2 Intercept</td>
<td>.13</td>
<td>.08</td>
<td>.13</td>
<td>.08</td>
<td>.28**</td>
<td>.03</td>
</tr>
<tr>
<td>Random Status Inequality Slope</td>
<td>.02</td>
<td>.05</td>
<td>.07</td>
<td>.12</td>
<td>.05*</td>
<td>.03</td>
</tr>
<tr>
<td>Covariance (Intercept and Slope)</td>
<td>-.01</td>
<td>.04</td>
<td>-.03</td>
<td>.05</td>
<td>.12</td>
<td>.03</td>
</tr>
<tr>
<td>LR(\chi^2) test</td>
<td>10.23*</td>
<td></td>
<td>6.09</td>
<td></td>
<td>8.55~</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Models were compared to the null model.*

~ $p < .10.$

* $p < .05.$

** $p < .01.$
Hypothesis 4: Mediation Analyses. To test the hypothesis that self-oriented team behavior mediates the relationships between status inequality, and performance and health, we used Baron and Kenny’s (1986) three criteria for verifying a mediated relationship. Specifically, there must be a significant relation between the independent and the dependent variables (step 1), significant relation between the independent variable and the mediator (step 2), and non-significant effect of the independent variable on the dependent variable after controlling for the mediator (step 3).

The results for Hypotheses 1, 2 (step 1), and 3 (step 2) fulfill the first two criteria of Baron and Kenny’s (1986) mediation procedures. Step 3 required each self-oriented play variable to be entered (separately) as a mediator into the equations for status inequality and individual performance, individual absences, and team absences; team performance was omitted from these analyses because the findings for Hypothesis 2b (step 1) were not significant. The results of these analyses can be found in Table 3-2, Table 3-4, and Table 3-5. First, we found no support for the hypothesis that self-oriented play mediates the relationship between status inequality and individual performance given that all three self-oriented team behavior variables were non-significant predictors: missed field goals ($\gamma = .01, p = .57$), non-scoring performance ($\gamma = -.01, p = .78$), and transgressions ($\gamma = .01, p = .46$). Second, missed field goals ($\gamma = .05, p < .05$) fully mediated the status inequality – individual absences relationship, while non-scoring performance ($\gamma = -.03, p = .36$) and transgressions ($\gamma = 0, p = .96$) did not. Last, non-scoring performance ($\gamma = .01, p = .91$) and transgressions ($\gamma = .07, p = .36$) did not
mediate the link between status inequality and team absences. However, the coefficient for missed field goals ($\gamma = .30, p < .01$) was significant and the effects of status inequality on team absences were attenuated by adding missed field goals into the equation, but these effects did remain significant. To summarize, our findings do not support Hypothesis 4a or 4b, and lend only partial support to Hypotheses 4c and 4d.

**Hypothesis 5: Status Inequality – Thriving Analyses.** Our final hypotheses state that greater status inequality will thwart individuals’ performance (Hypothesis 5a) and physical health (Hypothesis 5b) thriving over time. To test these hypotheses, we used a random coefficient model for individual growth with our six NBA seasons as time points (centered on time 1). This approach allowed us to model within-individual change over time (Level 1) and between individual differences in change over time (Level 2).

The results of the multilevel change models for performance appear in Table 3-7. Examining the coefficients for the slope term revealed that on average player performance declined over time. While the model did not show any main effects of status inequality ($\gamma = 1.19, p = .63$) after controlling for possible confounding variables, status inequality was negatively associated with the slope of performance over time ($\gamma = -2.29, p < .01$). Further, as hypothesized, a significant interaction emerged between the slope term, status inequality, and an individual’s status ($\gamma = 5.13, p < .05$). This fitted trajectory for change in performance, which is plotted in Figure 3-2, shows that on average, players on teams with higher status inequality experience performance declines across seasons in the league, however, these effects occur primarily for low status players. By contrast, low
status players on teams with lower status inequality exhibited performance enhancements over time. Hypothesis 6a is therefore supported.

Figure 3-2: Individual Growth Trajectory for Performance

Note. Low status inequality (high status inequality) refers to status inequality one standard deviation below (above) the centered mean, and low status (high status) refers to status at one standard deviation below (above) the centered mean, for all time points.
### Table 3-7: Random Coefficient Estimates for Individual Level Performance Trajectory\(^a\)

<table>
<thead>
<tr>
<th>Variable</th>
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<tr>
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<td>Model 2</td>
<td>Model 3</td>
<td>Model 1</td>
<td>Model 2</td>
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<td>$\gamma$ SE</td>
<td>$\gamma$ SE</td>
<td>$\gamma$ SE</td>
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<td>19.33** .30</td>
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<td>-.20** .03</td>
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<td>-.21** .03</td>
<td>-.21** .03</td>
<td>-.21** .03</td>
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<td>.47 .31</td>
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<td>-.235** .67</td>
<td>-.235** .67</td>
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<td>1.65** .48</td>
<td>1.65** .48</td>
<td>1.65** .48</td>
<td>1.65** .48</td>
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<td>5.84** .57</td>
<td>5.84** .57</td>
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**Random Components**

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Note. Model 1 was compared to the null model; Model 2 was compared to Model 1; Model 3 was compared to Model 2. * $p < .05$. ** $p < .01$.

\(^a\) Because standardizing dependent measures in growth modeling is inappropriate, the dependent measure represents performance per game.
Table 3-8: Random Coefficient Estimates for Individual Level Absences Trajectory

3-8 displays our findings for growth in player absences. We found no significant effect for the slope term ($\gamma = -.01, p = .13$); on average, therefore, player absences were largely static over time. However, a main effect for status inequality ($\gamma = .43, p < .01$) emerged after adding relevant control variables. The interpretation of this finding is that at all time points, players on teams with greater status inequality experienced more absences than players on teams with lesser status inequality. In addition, the results showed a significant relationship between status inequality, a player’s status, and the slope of absences across time ($\gamma = .26, p < .05$). Figure 3-3 displays this fitted trajectory for player absences. While high status players on teams with greater status inequality were absent more often than high status players on teams with lesser status inequality, contrary to our expectations, lower status players on teams with higher status inequality missed increasingly fewer games over time.
Table 3-8: Random Coefficient Estimates for Individual Level Absences Trajectory

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Random Components

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<td>Random Slope</td>
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<tr>
<td>LR $\chi^2$ test</td>
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<td>2.70</td>
<td>35.47**</td>
</tr>
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</table>

Note. Model 1 was compared to the null model; Model 2 was compared to Model 1; Model 3 was compared to Model 2.

* $p < .05$.  ** $p < .01$.

* a Because standardizing dependent measures in growth modeling is inappropriate, the dependent measure represents absences per game.
3.4 Discussion

Despite recent calls to bring status into organizational research (Pearce, 2001; Ravlin & Thomas, 2005), the applicability of status theories to past studies of organizations (e.g., Berdahl, 2007; Bunderson, 2003), and the considerable role of status in organizations (Pfeffer, 1998), it is surprising that with limited exceptions (e.g., Bacharach, Bamberger, & Mundell, 1993; Washington & Zajac, 2005), very little research has explicitly studied the role of status in organizations. The present study addresses this void. We suggest that status inequality within teams is a source of social distance, which has implications for a range of team-based outcomes.
Our findings show that teams with greater status inequality have lower individual performance; moreover, this finding was moderated by status position, such that the performance of lower status individuals suffered most under conditions of greater status inequality. We did not find that status inequality was related to team-level performance, perhaps because the performance of high status players, who may contribute more to team performance, was consistent across varying levels of status inequality. By contrast, no moderating effects were found for individual absences due to physical ill-health, which, along with team absences, were significantly associated with conditions of greater status inequality.

Moreover, the analyses revealed that status inequality was positively related to self-oriented team behavior, which in some cases acted as a mediator between the status inequality – individual absences, and – team absences relationships. Our behavioral, as opposed to perceptual, conceptualization of self-orientation may help to explain the null findings for the mediated relationship between status inequality and performance. Perhaps other- versus self-orientation may be best reflected in a measure of collective identification, which would capture the extent to which team members feel an emotional attachment to the team and team goals (e.g., Van der Veght & Bunderson, 2005), and personal identity orientation, which is evoked by self-interest (Brickson, 2000).

Finally, we found mixed evidence for the dynamic effects of status inequality on individual performance and physical health thriving over time. As hypothesized, status inequality thwarted performance thriving across time, particularly for lower status
players. The pattern of absences over time was less consistent with our hypotheses: as expected, for higher status players, absences over time were more frequent among those players on teams with greater status inequality. By contrast, low-status players on teams with greater status inequality saw their absences decline, becoming more similar to low-status players on teams with lesser status inequality. Together these results suggest that low-status players played more games across time, however, performed worse in those games. While unexpected, this pattern may have resulted because low-status players on teams with greater status inequality reside in the most vulnerable positions – they begin with the lowest performance records and the most missed games, thus they may feel increasing pressure to play whether ill or injured to secure their positions in the league.

*Theoretical Contributions and Practical Implications*

Our findings have both theoretical and practical implications for a number of organizational literatures. First, we add to the growing presence of status theories in organizational research. We extend previous conceptualizations of status at the individual-level by exploring status distributions in teams, and show that status inequality explains unique variance beyond individual status position in performance, physical health, and thriving. These results warrant further investigation of status hierarchies in team settings, especially given that teams are now widespread in organizations. Of importance to managers may be recognizing the status characteristics that are valued within the organization and making strategic composition decisions when designing teams, particularly if interdependence is integral to team success.
In addition, our research adds to recent discussions of whether and how status differences play a role in determining the effects of team diversity. In some cases, team diversity can pool complementary knowledge and idea sets, promoting learning, innovation, and performance (e.g., Wanous & Youtz, 1986). However, to the extent that diverse attributes carry status value and rank-order and regulate relationships, this may not be the case (Van der Vegt et al., 2005). One reason for this inconsistency may be in the conceptualization of diversity as a function of varied expertise and opinions within a team or as a function of inequality across positions. Harrison and Klein (2007) point out a fundamental difference between diversity based on the variety versus the inequality of team attributes, where each is likely to have different antecedents and consequences. Relative deprivation is a key component of inequality, where those at the top have disproportional control over a valued attribute. As such, while both variety and inequality are a measure of difference between team members, status distinctions are made based on relative importance, and thus are likely to have unique effects. Our results support the notion that status inequality in particular may be problematic in team settings, which suggests that researchers should both determine whether demographic attributes carry status value within a given context, and consider the distributional form of demographic differences when theorizing about the effects of demographic diversity in team settings. Likewise, managers may benefit from considering the interplay of variety, inequality, and status positions when composing teams.
Finally, team research has typically focused on team process and performance based outcomes. Our examination of physical health and thriving extends the assembly of outcomes relevant in a team context. One advantage of the present study is that, unlike most studies that use absences to measure health, we exclude absenteeism not due to injury or illness, minimizing error. Practically, identifying the potential causes of missed time from work is of significance to organizations, with health care costs a growing concern. Further, the results of our study suggest that, at least in some organizations, absences can impact performance, intensifying their effects (similar results found by Goodman & Garber, 1988). Theoretically, our conceptualization of status at both the position and distribution levels contributes to the growing study of status and health in occupational health psychology. Our findings show that to understand the relation between status and health, research must explore both an individual’s status and the distribution from which it is drawn.

Similarly, we add to a growing literature on the conditions that enable individuals to thrive in organizations. Spreitzer et al.’s (2005) theory of thriving acknowledges that individuals are embedded in social contexts that either allow them to grow and flourish at work, or that thwart such development. Very little research has attempted to explore the contextual predictors of thriving experiences empirically. Our research shows that status inequality is one important, yet complex, contextual factor that is associated with individual thriving over time.

*Strengths, Limitations, and Future Research Directions*
Inherent in this study are numerous strengths. The measurement of performance is objective, as is that of health-related absences. Likewise, the nature of the dataset allows for the control of multiple, salient intervening variables that, if omitted, may bias the results, and for examining the effects of status inequality across multiple levels of analysis, including individuals, teams, and time. In fact, time may be one of the greatest oversights in organizational research (Ancona, Goodman, Lawrence, & Tushman, 2001). Nevertheless, a number of limitations of the present study warrant noting. Sample characteristics may limit the extent to which the findings can be generalized. NBA players are elite level athletes in highly visible occupations. While we identified status markers relevant in the NBA context, their salience may be enhanced due to publicly visibility. Thus, the extent to which status cues are more or less explicit in other organizational settings may limit the generalizability of our results. Furthermore, the NBA employs only male athletes. Given that men and women may approach relationships differently (e.g., Connell, 2002), future research should consider whether these findings can be extended to samples of both males and females. However, the characteristics of the sample do highlight the relational nature of status; even in a population of individuals with very high social status, relative status differences are significant.

We suggest that status inequality is a representation of social distance that heightens feelings of dissimilarity and disintegration; however, we do not measure individual cognitions or social interactions directly. Future research that accounts for the
pattern of interactions within a team would be beneficial. In particular, a social networking approach might allow researchers to determine how status positions and status hierarchies structure interactions between teammates, and by doing so influence team processes and outcomes. Networking methods may also be conducive to obtaining perceptual measures of team status positions and exploring a variety of status compositions. Our study identifies one relevant dimension of status structure; namely status inequality; however, team research could gain from exploring additional forms of distribution. For example, in large teams, faultlines may divide the team members into subgroups of similarly ranked status positions, creating an in-group – out-group effect and influencing team dynamics. Thus, our model may not generalize easily to teams that are not comparable in size to those of the NBA. Larger teams may be more likely to have greater status inequality than smaller teams, which makes extending our results to teams of varying sizes an important endeavor for future research.

Conclusion

The objective of this study was to extend individual-level perspectives of status and demonstrate the importance to status structures to team research, and more specifically to explore the role of status inequality in team settings. To that end, we provided a conceptualization of status inequality in teams, and showed that status inequality was relevant at multiple levels of analysis, over a number of diverse outcomes, and across time. We hope that these findings encourage future research into the fruitful study of status structures in organizations.
Endnotes

1 The total number of teams in the league varied slightly across years.

2 While correlations of 0.9 (Tabachnick & Fidell, 2000) between predictor variables are often used as a benchmark to judge whether multicollinearity may be a relevant statistical concern, due to the relatively high correlation between status inequality and mean status we conducted additional tests to determine whether multicollinearity may be present in our models. We found that the Variance Inflation Factors were well below conventional standards (i.e., 10) for detecting multicollinearity, with the most extreme case in any of the analyses being 3.20. Similarly the Tolerance levels for all analyses were above those that would prove worrisome (i.e., .10), .31 being the lowest in any of the analyses.
3.5 References


Chapter 4

Manuscript 3: A Relational Model of Status Inequality in Teams

Abstract

We develop a model of the nature and consequences of status inequality in groups. Status inequality is a particular form of status structure and is reflected in the extent to which status positions within a group are dispersed. Our model explores how status inequality influences social cognition, and how a team’s social structure emerges from social cognitions. We discuss the implications of status inequality for team learning, performance, and well-being, and the moderating effects of shared cultural values.
4.1 Theoretical Development

Team composition has increasingly become the object of organizational research in recent years. The main focus of this research has been on demographic composition factors such as age, gender, ethnicity, functional background, and education (Jackson, Joshi, & Erhardt, 2003), and deep-level composition factors such as personality, values, and abilities (e.g., Bell, 2007). Largely escaping this work has been an emphasis on the status composition of teams, despite a vast sociological literature demonstrating the inevitable emergence of status hierarchies in small groups (e.g., Berger, Ridgeway, Fisek, & Norman, 1998). These status hierarchies can vary widely in form and, if not derived from formal status positions, emerge and become legitimized in the group over time through social interaction (Ridgeway & Walker, 1995). Given that the study of status structures in small groups has a deeply entrenched history in the sociological literature, its near omission from the organizational research on teams is intriguing (DiTomaso, Post, & Parks-Yancy, 2007), especially given that organizations are thought to have a clear role in creating and maintaining status distinctions (Pfeffer, 1998).

Our purpose in this paper is to examine how team status structure influences team processes and outcomes. Evidence suggests that status hierarchies are related to basal properties of successful teamwork, such as processes of social influence and interaction, and can become durable organizers of social behavior within small groups (Berger, Rosenholtz, & Zelditch, 1980; Ridgeway & Correll, 2004). Our interest in particular is on one specific feature of status structure, namely status inequality, which has been a central focus of scholarship on status for decades, but has rarely been conceptualized as a
defining feature of status structures on which to make between-group comparisons. Instead, inequality is typically treated as the background for studying the enduring nature of stratification and the experiences of individuals occupying various social positions. By contrast, we explore the effects of variation in the level of status inequality across teams.

Status inequalities are no stranger to organizations. Making news was professional soccer player David Beckham, who was recruited in 2007 by the Los Angeles Galaxy, a Major League Soccer (MLS) team in the United States, at a salary about 500 times higher than that of his teammates (British Broadcasting Corporation, 2007). This is a level of inequality unrivalled by other teams in the league in an industry long-dominated by status inequalities. While perhaps the differences are less stark, teams in organizations more generally are also likely to vary in the extent to which status distinctions are observed and prevalent, and thus understanding the implications of such differences is quite important to understanding team composition in general.

We begin by defining status; in doing so, we emphasize its relational nature and provide our rationale for directing attention to status inequality. We then introduce a model of status inequality that both describes how processes of social cognition form the foundation for social structure within groups, and the means by which social structure has implications for team outcomes. Our model is inherently multilevel, describing how macro group properties influence individual level cognition, from which group processes emerge. Specially, we illustrate how, by influencing status salience and self-definition, status inequality relates to four elements of social structure within teams: dominance,
decision-making, affect, and competition. Before discussing the implications of this model for team learning, performance, and health and well-being, we consider the moderating role of shared cultural values in determining the emergence of social structure in teams. Finally, we discuss the implications of our model for theory, research, and practice.

Definition and Conceptualization of Status and Status Inequality

**Defining status**

Some discussion of our use of the term status is warranted given that status is truly an interdisciplinary construct with different definitions. We refer to status as an individual’s position or rank in an ordered system of relationships, where higher status is associated with greater respect, prominence, and prestige (e.g., Ridgeway & Walker, 1995; Washington & Zajac, 2005). Status characteristics are the markers of status; they carry with them an ascribed value or signal of worthiness (Berger et al., 1980; Ridgeway & Balkwell, 1997; Thye, 2000). Common examples include gender, race, occupation, and education, however, evaluations of status are subjective, shared, and relative (Ravlin & Thomas, 2005; Washington & Zajac, 2005) and thus can be derived from any characteristic deemed contextually important (Ball & Eckel, 1996; Barkow, 1992; Berger et al., 1980; Thye, 2000). For example, formal compensation structures and hierarchical levels tend to be institutionalized status characteristics, but organizations can support status distinctions based on a multitude of elements, such as job titles, attire, office space, and perks (Pfeffer, 1998). Thus, status can be conferred regardless of whether clear
structural status distinctions are present in the organization. Status characteristics or symbols are then reinforced through patterns of interaction (Berger et al., 1980; Sauder, 2005).

Past research has distinguished between achieved or earned status on the one hand, and ascribed or unearned status on the other (Ball & Eckel, 1996; Ravlin & Thomas, 2005), where performance or competence determines achieved status, but is irrelevant in the case of ascribed status. Therefore, while status is often accompanied by an assumption or expectation of competence, such that higher status individuals are thought to perform better than lower status individuals (Gerber, 1996), thereby legitimating inequality (Ridgeway & Erickson, 2000), in fact status is often an unearned privilege (Ravlin & Thomas, 2005; Washington & Zajac, 2005).

As a mechanism of human sociality, status is a primary determinant of behavior. Humans are driven by status, and status striving has long been recognized as one predominant motivational force in social interactions (Barrick, Stewart, & Piotrowski, 2002; Buss, 1999). Simple experiments demonstrate its power to motivate, showing, for example, that people are willing to forgo absolute income to increase their relative status in a group (Frank, 1999). The desirability of status is often attributed to its association with advantageous outcomes, where individuals with higher status tend to have more resources (Gallo & Matthews, 2003), power (Keltner, Anderson, Gruenfeld, 2003; Thye, 2000), and are treated better socially (Anderson, John, Keltner, & Kring, 2001). Whilst so, status also has an inherent intrinsic value beyond that of obtaining material benefits
(Huberman, Loch, & Önçüler, 2004). Achieving status has emotional significance and is a valued resource in and of itself (Huberman et al., 2004). Schnittker and McLeod (2005) suggest that status positions provide “more than material resources: they serve as reference points for social comparison and as personal social identities that influence perceptions, desires, and social affiliations” (p. 81).

Status, Relatively Speaking

A notable feature of status is that, by its very nature, it is a relational concept (e.g., Washington & Zajac, 2005). Status is a position or rank that has no meaning in isolation from that of others. In a hierarchy, an individual can have high status only if someone else occupies a lower position, and can make sense of that position only with the other’s status as a point of reference. For this reason, there has been much research attention within the social sciences on the motivational, emotional, and irrational nature of relative standing, generally finding that people care a lot about how their positions compare to those of others.

A classic example of this research occurs in ultimatum games in which participants are paired and randomly selected to be either a ‘Proposer’ or a ‘Responder’ (Güth, Schmittberger, & Schwarze, 1982). The Proposer is asked to divide a sum of money, typically $10, between the two parties, following which the Responder either chooses to accept or reject the allocation. If accepted, both parties receive their sums as allocated by the Proposer; otherwise, the parties receive nothing. Conventional economic wisdom suggests that the Proposer should maximize wealth by offering $1 (the lowest
Güth et al. (1982) were the first to show that the data simply do not support this reasoning, and this finding has been replicated repeatedly (Haselhuhn & Mellers, 2005). People seem largely concerned not only with absolute rewards, but with relative ones too. Rarely do Proposers offer the minimum allocation permitted, instead opting most often for an even split (see Frank, 1999). Similarly, when asked how much they are willing to accept, Responders are disinclined to accept any offer that leaves them with less than a quarter of the total windfall.

Theories of relative deprivation suggest that people do not evaluate their outcomes against an objective or absolute quantity, but instead use salient reference points, typically the outcomes of others, to make comparisons (Crosby, 1976; Martin, 1981). Dissatisfaction occurs when a person’s outcomes fail by comparison to those of the referential other. A recent meta-analysis affirms that the pay level of referent others is among the strongest determinants of an individual’s pay satisfaction, particularly when the referent works in the same organization or does a similar job (Williams, McDaniel, & Nguyen, 2006). Adams’ (1965) equity theory rests on a similar premise: People determine the fairness of their rewards and resources by subjectively creating a ratio of inputs to outputs for themselves and referent others. What determines people’s overall satisfaction or perceptions of justice is not the absolute value of their own ratio, but its relative merit across social comparisons.
The relative nature of status positions explains why a great deal of attention has been devoted to understanding status structures as a unit, as evidenced by the depth of theory available to explain how and why status hierarchies evolve and endure (e.g., Berger et al., 1980; Fisek, Berger & Norman, 1995; Gould, 2002; Ridgeway & Walker, 1995). Status structures both define the individual status positions that comprise them, and represent the multitude of relative status differentials within the structure; thus, from a group perspective, they are a meaningful way of conceptualizing amassed status. We focus in this research on one dimension of a group’s status structure, namely status inequality, which we define as \textit{the level of disparity or dispersion in status between individuals within a group}. Status inequality is conceptualized at the collective level of analysis, reflecting on a continuum the degree to which status positions in a social system are relatively equal or unequal. In effect, status inequality reflects the entirety of the group’s status differentials and its level of stratification. However, at the onset, we distinguish status inequality from the concept of stratification more widely, which typically applies to populations larger than groups, and is characterized by more limited mobility between status positions (Scott, 1994). Below we begin the discussion of our model of status inequality in teams, and its implications for social cognition, social structure, and team outcomes.

4.2 Propositions: A Model of Status Inequality in Teams

Our model takes a relational approach to understanding how individuals respond to status inequality on teams. Specifically, the model is premised on the notion that status
structure drives social context; it organizes the patterns of relationships between team members (e.g., Ridgeway, 2000), and status inequality in particular does so in predictable ways. Structures convey meaning to the individuals embedded within them; they shape peoples’ understanding and engagement of their environments (Baron & Pfeffer, 1994). Benjamin and Podolny (1999) claim that structures “direct attention, dictate the information on which we focus, and shape the meanings, attributions, and emotional responses that such information elicits” (565). The premise that macro-structure influences micro-social processes (e.g., Baron & Pfeffer, 1994; Ridgeway, 1994) forms the basis for our understanding of inequality on teams. Specifically, the influence that status structures have on social structure stems from their power to affect social cognition at the individual level.

We agree with previous authors who suggest that individuals are driven to derive meaning from context (Baumeister & Vohs, 2002; Wrzesniewski, Dutton, & Debebe, 2003). Cues from the social environment guide individuals’ interpretations of themselves, their teammates, and the connection between themselves and their teammates, which, according to the symbolic interactionist tradition, is a necessary criterion for social interaction (Stryker, 1980). Status ordering systems specifically help individuals to define themselves in a given situation such that they can act in culturally appropriate ways; accordingly, the patterns of interaction that emerge in the group are inseparable from processes of social cognition (Ridgeway, 2006). Below we discuss how status inequality, as a specific form of status structure affects status salience and self-definition; thereafter,
we consider how these cognitive processes form the foundation of a group’s social structure based on dominance, decision-making, affect, and competition, and the moderating effects of shared cultural values on this process. The model in its entirety is outlined in Figure 4-1.
Figure 4-1: A Model of Status Inequality in Teams

- **Social Structure**
  - Dominance-Based (P1)
  - Centralized Decision-Making (P2)
  - Low Trust (P3a) and Collective Identification (P3b)
  - Competition (P4)

- **Social Cognition**
  - Status Salience
  - Self-Definition

- **Team Implications**
  - Learning (P6)
  - Performance (P7)
  - Health & Well-Being (P8)

- **Shared Cultural Values**
  - Power Distance (P5a)
  - Collectivism (P5b)

- **Status Inequality**
Social Cognition

Social cognition refers to the process of defining one’s self and its connection to others in social situations through salient social objects or events (e.g., Howard, 1994). Because human minds have limited capacity to store and process information, attention is directed toward that which is conspicuous. We argue that status inequality increases the likelihood that status is salient and captures the attention of team members. In turn, the structure of status positions guides categorization processes of the self (and by extension, others) and its relationship and connection to others on a team. Ridgeway and Correll (2004) argue that it is through this process of salience and self-definition that status hierarchies influence the behaviour and patterns of interaction that make up social structure at the collective level. We will discuss both of these in the following sections.

Status Salience. Baron and Pfeffer (1994) emphasize the role of structure in driving social cognition, its existence molding what people pay attention to and value. For example, Pierce and White (2006) showed that structures evolving from the resource context of a group (i.e., whether resources are dispersed, predictable, concealed, or consumed immediately) influenced how group members interpreted their environments. In their experimental study, they showed that when resource allocations were highly contestable, group members perceived each other’s approaches to the experimental game as competitive and directed at winning. On the other hand, when resources had low contestability, group members encouraged one another and approached the game more cooperatively. Thus, resource structure determined the extent to which winning was
salient and valuable to participants playing equivalent experimental games in different structural contexts.

The same premise can be applied to status inequalities in particular. Specifically, greater status inequality provides a different context for making attributions of value than do more equal systems. Greater status inequality emphasizes distinctions between team members by directly outlining the positions and persons associated with greater and lesser prestige, prominence, and respect. The greater the inequality, the greater the value placed on higher status positions, as evidenced by the disparity in resources and rewards accorded to these positions. However, not only is higher status associated with better rewards, but also with fulfilment and pride. Ellemers, Doosje, van Kippenberg, and Wilke (1992) found that members of minority, high status groups felt more proud and satisfied to be in their groups than did other group members. Consistent with tournament theories of motivation, these benefits are greater when high status positions are scarce (i.e., when status inequality is greater), as fewer others are likely to occupy them (e.g., Lazear & Rosen, 1981; Rosen, 1986). Accordingly, position, or relative position, is salient and valuable in a way that it is not the case in more status equal systems; in hierarchical contexts, status becomes a clear aspiration.

*Self-Definition.* When status is perceived as a salient social distinction, it is also a source of self-definition (Ridgeway & Correll, 2004). Thus, by directing attention to the relevance and value of status, status inequalities guide how people make sense of their place on a team; they give meaning to status positions. A prominent way that individuals
construe this information is through social comparison (Locke, 2003). Specifically, to understand how one fits into the team’s hierarchy, individuals use status to make social comparisons between themselves and their teammates, often instinctively. These social comparisons can be automatic, such that individuals make comparisons affecting their self-perceptions with little or no awareness (Stapel & Blanton, 2004), and are either downward (i.e., seeing one’s self as superior), upward (i.e., seeing one’s self as inferior), or neutral (i.e., seeing one’s self as comparable). Research has shown that these observations of status also tend to be perceived quite accurately (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). Status comparisons help individuals to form an impression of who they are in relation to the rest of the group by relaying important information about their perceived merit, competence, and worth relative to others on the team (Wilkinson, 2005), and the degree to which they are valued and respected by the organization overall (Dutton, 2003; Pfeffer, 1998), thus speaking to a fundamental human desire for belonging and acceptance in close interpersonal relationships (Baumeister & Leary, 1995).

However, in addition to substantiating an individual’s place on a team by defining its value in relation to that of others’, comparisons also drive self-evaluation (Wood, 1996). Perceptions of worth and respect on the team become internalized and help form an individual’s identity at work. Wrzesniewski et al. (2003) suggest that “the experience of receiving evaluative information about the worth of one’s job, role, or self is powerful. Its impact strikes at the core of the self and its worth in the organization” (113). Thus,
individuals’ positions in a hierarchy are not simply a source of social comparison and an indication of the extent to which they are valued, but can also become self-representations. Consistent with the sociometer hypothesis of self-esteem (Leary, Tambor, Terdal, & Downs, 1995), evaluations from others become self-definitional (e.g., de Cremmer & Tyler, 2005); their judgements become incorporated into ‘who we are’.

The social comparison literature provides a strong basis for understanding how people’s self-perceptions in relation to others influence their self-evaluations. Research has focused on the implications that comparisons have on an individual’s mood, self-appraisal, self-esteem, and perceptions of fairness (Locke, 2003; 2005; Stapel & Blanton, 2004; Tesser, Millar, & Moore, 1988). Given that greater status inequality is defined by individual status distinctions, two relevant types of self-evaluations that are likely prompted by greater status inequality are feelings of inferiority and superiority. Upward comparisons, occurring when the self is perceived as inferior to a referent, have long been theorized as harmful to self-evaluations (e.g., Wills, 1981; or for a review see, Wheeler & Miyake, 1992), and on balance, findings from naturalistic social comparison studies show that people feel worse about themselves following these upward social comparisons in contrast to downward comparisons, particularly when comparisons are based on salient social features (Locke, 2003). By contrast, beginning with Wills’ (1981) theory, downward social comparisons have generally been thought to enhance perceptions of the self and to be important to an individual’s need to maintain a positive self-regard. Feeling superior to others has positive effects on mood, affect, well-being, and self-esteem (e.g.,
Brown, 1986; Locke, 2005; Wheeler & Miyake, 1992), and generally, people tend to prefer to be at least slightly better than others and tend to look for ways to enhance their self-evaluations (Tajfel & Turner, 1979). However, such comparisons are also associated with feeling less similar (Collins, 1996) and connected (Locke, 2005) to those lower in the status hierarchy.

Therefore, by making status a salient means of social comparison within teams, status inequalities shape how individuals think about themselves in relation to others and their overall self-evaluations. Extending this notion further, status inequalities also influence the perceived connections between members of a team. By signalling relative prestige, and thereby attributing value to having status, status inequalities provide meaning to the space between people; they reflect and create social distance. Bar-Aran, Liberman, and Trope (2006) refer to social distance, one component of psychological distance, to define the social space or perceived distinctions between one’s self and others. Greater status inequality creates these distinctions between team members, and in general, people feel more distant from dissimilar others (Chattopadhyay, 1999; Tsui & O’Reilly 1989; Tsui, Egan, & O’Reilly, 1992). More specifically, data from the social comparison literature show that regarding the self as inferior or superior is a prominent source of social distance. Individuals feel alienated from a target when they find their own traits to be less desirable than those of the target, and they feel less similar and connected to targets with less desirable traits than themselves (e.g., Locke, 2005). Locke (2003) concluded that “target characteristics that maximize feelings of status (namely,
undesirable characteristics) also tend to undermine feelings of solidarity” (p. 629). Therefore, unequal status structures maximize social distance, where people lower in the hierarchy regard themselves as alienated from those above them, and people higher up experience less commonalities with those lower than them in the hierarchy. These findings are consistent with sociological research showing that stratified collectives are characterized by social distance, as reflected in the segregated interaction patterns of different status groups (Bottero & Prandy; 2003; Prandy, 1999).

Accordingly, status inequality is closely related to social cognition, influencing the extent to which status is salient, and guiding perceptions of the self and its connection to the team. Below we describe the interdependence of social cognition and social structure in the context of team status inequality.

From Social Cognition to Social Structure

The foundation of social structure lies in social cognition (Fiske, 1991; Howard, 1994; Morgan & Schwalbe, 1990; Pierce & White, 1999; Ridgeway & Correll, 2004). The definitions that individuals have of themselves and others cue affective and behavioural responses that are repeated and sustained over time, thereby creating structured patterns of social interaction within a group. Ridgeway and Correll (2004) suggest that in the process of self-definition, schemas or scripts for interaction are evoked, which guide our evaluation and treatment of others in ways consistent with the overall status structure. Actions then become self-fulfilling and reinforce self-definition,
the result of which is ingrained social behavior. From these behaviors and interaction patterns emerge a group’s social structure (Pierce & White, 2006).

While numerous taxonomies of social structure exist across various disciplines, generally they share an underlying distinction between cooperative and cohesive, versus competitive and dominance-based patterns of social relationships (Pierce & White, 2006). Based on Chance’s (1963; 1970) classification of agonic and hedonic social structures, Pierce and White (2006) identified four salient dimensions that characterize social structures: dominance, decision-making, affect, and competition. Agonic social structures are defined by strict hierarchies of influence, autocratic decision-making, negative affect, and competition between group members. In contrast, hedonic social structures reflect equal power, joint decision-making, positive affect, and cooperation. We argue that group processes consistent with agonic social structures are likely to emerge in teams with greater status inequality, and below discuss the social-cognitive underpinnings for this assertion. In particular, we explore each of the four dimensions of social structure in turn, as they pertain to team processes.

*Dominance and Influence.* Social structures are often distinguished by the extent to which they can be characterized by imbalances in power, dominance, and influence. Cognitive evaluations, and in particular social distance, can explain how status inequalities lead to these asymmetries. Perceived social distance is associated with using high-level construals (e.g., Bar-Aran et al., 2006), which “are relatively simple, decontextualized representations that exact the gist from available information” (Trope &
Liberman, 2003, 405). For example, out-group members who are socially distant tend to be viewed as less unique and more homogeneous than in-group members. Thus, using high-level construals, individuals are more likely to make global attributions and overgeneralizations about their teammates and see them as more prototypical of their social categories, leaving them prone to preconceptions and biases. Most often status research has focused on how groups are biased in their performance expectations of other group members, and has found that group members occupying lower status positions are attributed lower performance expectations and are viewed as less competent than higher status group members, regardless of their actual qualifications (Driskell & Mullen, 1990). Expectation states theory describes the consequences that these attributions have for how power is allocated within a group.

Expectation states theory (Berger, Cohen, & Zelditch, 1972; Berger et al., 1980) is based on the premise that group status structures influence how group members perceive, interact with, and treat each other by affecting performance expectations that they hold for one another (e.g., Berger et al., 1980). Status differentials signify the varying performance capabilities, accurate or not, of group members, and these expectations impact behavior, such as patterns of deference, influence, and communication (e.g., Belliveau, O’Reilly, Wade, 1996; Driskell & Mullen, 1990). Empirical evidence from research on small groups shows that high status members are typically given more opportunities to speak, have more influence, and have their opinions weighed more carefully (Diskell & Mullen, 1990; Shepherd & Brown, 1956; Weisband, 1956).
Weisband et al. (1995) suggest that group members are more concerned about evaluations from higher status group members and accordingly focus more of their attention on them, and avoid opposing their views. They found that when high status group members were mislabeled to the rest of the group as low status members, they received worse evaluations even when they gave equal input, and concluded that status differences are related to people’s expectations, assumptions, and how they interact with, approach, and evaluate others. Further, these findings were robust across face-to-face and more distant, computer-mediated groups. In this way, status structures implicitly and powerfully shape our evaluations of others, and the distribution of power within a group (Belliveau et al., 1996; Kilduff & Krackhardt, 1994).

Existing evidence supports the contention that these imbalances in dominance and influence are more prevalent with greater status inequality. According to Wilkinson (2005), when income inequality is greater at the societal level, those higher in the status distribution engage in downward discrimination, snobbery, and displays of superiority to maintain the benefits of status and to accentuate social distance. These behaviors in turn reinforce the dominance of high status group members. A recent meta-analysis showed that high status groups tended to view their own group more favourably and out-groups more unfavourably than did low status groups, even when status distinctions were arbitrarily constructed (Bettencourt, Dorr, Charlton, & Hume, 2001). From an organizational perspective, Van Maanen’s (1991) insights derived from ethnographic research into interactions between employees at Disneyland also revealed that greater
status inequality prompted downward discrimination. There, “few Ambassadors or Tour Guides, for instance, will stoop to speak at length with Sweepers, who speak mostly among themselves, or to Food workers” (p. 14). The more prestigious is a high status position, occurring as status inequalities widen, the more likely are these displays of superiority. However, it is not simply that status inequalities prompt dominance-based behaviors such as downward discrimination, they also legitimize the unequal concentrations of resources and power associated with the dominant positions (Wilkinson, 2005).

Proposition 1: Greater status inequality on a team will enable the emergence of a social structure characterized by dominance and influence imbalances.

Decision-Making. Not surprisingly, the distribution of dominance and influence within a group is closely related to the manner in which a group makes decisions. Research suggests that in some social structures group decisions tend to be made by consensus, whereas in others, the dominant use their power to control group decision-making (Fiske, 1991; Pierce & White, 2006). Kirchler and Davis (1986) manipulated status inequality in experimental groups and found that groups with greater status inequality were more likely to use a “power-wins” approach to decision-making, where high status individuals controlled decision outcomes. Conversely, equal status groups were more likely to make their decisions based on the quality of input regardless of the contributor’s status.
Higher status members perceive their positions as conferring respect and esteem, and thus contribute more to group discussions; these contributions are weighted more heavily by others who view them as more confident and competent (e.g., Ohtsubo & Masuchi, 2004), in part explaining why status inequality prompts high status group members to have more decision-making power. However, in addition to preconceptions of status eliciting stronger input from individuals occupying high status positions, those with lower status are deterred from making unique contributions to group decision-making, incurring punishments for deviating from the opinions of high status group members and being rewarded for their conformity (Sheldon, Thomas-Hunt, & Proell, 2006). Thomas-Hunt and Phillips (2004) found that low status group members, in this case women, were perceived to have less expertise and were less influential in their groups when they were actually task experts compared to when they were not. This effect was reversed for male group members, suggesting that regardless of actual competence, high status group members were given decision-making priority based on presumptions of task competence under conditions of greater status inequality.

Evidence drawn from teams in organizations also supports the notion that greater inequality enables centralized decision-making. In a qualitative study of top management teams, Eisenhardt and Bourgeois (1988) found that when the power distinctions between team members were greater, the CEO was more likely to use an autocratic decision-making style compared to the democratic approach of CEOs leading more equal top management teams. Similarly, Edmondson (2002) found that in a variety of types of
teams at various organizational levels, greater power imbalances within the team resulted in a centralization of power within the leader, partly because team members felt obligated to respect and defer to the high status leader, and partly because the leader’s ideas were more likely to be acknowledged and accepted. Edmondson’s results show that teams’ attempts to minimize power distinctions were associated with more active debate within the team, while teams that accentuated power distinctions saw those at the top garnering greater decision-making power, and those at the bottom reluctant to contribute.

**Proposition 2: Greater status inequality on a team will enable the emergence of a social structure characterized by centralized decision-making.**

**Affect.** Ridgeway (2006) suggests that self-definitions in relation to others are “affectively tagged”. We consider two affective responses relevant to a team’s social structure that are often considered to be elements of social capital: trust and collective identification.

As opposed to a strictly calculated decision, trust has been conceived as a feeling or relationship between two or more parties or as a social orientation toward others (Fine & Holyfield, 1996; Kramer, 1999). Status inequality helps to shape these trust orientations by way of social cognition. Important to this discussion is distinguishing this form of trust as a social orientation or tendency to expect social reciprocity and cooperation, from trust in the performance abilities of others. Expectations of competence certainly build a sense of competence-based trust between people (Cook & Wall, 1980; Mayer et al., 1995; McAllister, 1995). Because status structures help to shape the
performance expectations individuals have for each other, they influence the development of trust in performance aptitudes, whether or not these expectations accurately reflect others’ abilities. Thus, it could be expected that greater status inequality will encourage upward flows of trust in others’ abilities to perform adequately. As a dimension of social structure however, our interest is in trust as a general feeling and approach towards other group members.

Greater status inequality is likely to jeopardize trust that derives from one’s confidence that others will act in ways that reflect trustworthy social motives. Social distance increases suspicion and doubt about others’ intentions to act solely on self-interest, which makes trusting them more risky – trust requires accepting the risk involved in expecting that others will act benevolently (Mayer, Davis, & Schoorman, 1995; Whitener, Brodt, Korsgaard, & Werner, 1998; Williams, 2001). Likewise, when individuals feel alienated from each other, they are less likely to trust one another (e.g., McAllister, 1995), and to act in ways that signal they can be trusted by others. Schnittker (2004) showed that the tendency for individuals to be less trusting of socially distant others (e.g., Goto, 1996) could be explained in part by the other party’s display of trustworthy behavior. In a study of trust between patients and physicians, the author showed that physicians displayed more trustworthy behaviors, including thorough examinations, listening, and giving explanations, toward less socially distant patients, partially accounting for the negative relationship between social distance and trust.
Proposition 3a: Greater status inequality on a team will inhibit the emergence of a social structure characterized by trusting orientations toward others.

Similarly, by creating social distance, status inequality is also likely to impede the formation of collective identification by team members. Collective identification includes cognitive and evaluative components, however, it is the emotional component of collective identification that relates most closely to social interaction, where individuals classify themselves as members of the group and this membership is of value and emotional significance to them (Van der Vegt & Bunderson, 2005). Members of teams who are characterized by social distance and lack a sense of commonality are not likely to categorize themselves by their team memberships, which limits the extent to which they derive emotional value from their role on the team. For instance, in a sample of multidisciplinary project teams, Van der Vegt, Van de Vliert, and Oosterhof (2003) found indirect support for a social categorization effect, where team members who differentiated themselves into social categories had lower team identification. Evidence suggests that for lower status team members, the identification process may be stalled further because team members who feel disrespected are less likely to develop a sense of group identification and engage themselves in group activities (e.g., Lind & Tyler, 1988).

Proposition 3b: Greater status inequality on a team will inhibit the emergence of a social structure characterized by collective identification.

Competition. Social structures are often defined in terms of competitive and cooperative interactions. We argue that status inequalities prompt competitive strategies
by making status salient and meaningful. Recall that when status inequalities widen, high status positions are both more scarce and more esteemed, increasing motivation to obtain high status. Thus, greater status inequality helps to create an atmosphere for status striving. The basic tenets of social identity theory rest on the notion that, to preserve a positive social identity, people aspire to belong to social groups that can be favourably distinguished from other groups (Ellemers, van Knippenberg, DeVries, & Wilke, 1988; Ellemers, van Knippenberg, & Wilke, 1990; Tajfel & Turner, 1979). However, by definition, greater status inequality precludes team members from advancing to higher positions together; status striving is characterized by individual attempts to surpass others (Huberman et al., 2004; Loch, Huberman, & Stout, 2000; Loch, Yaziji, & Langen, 2001). Therefore, like tournament structures of rewards, status inequality sparks competition for higher ranking positions (Lazear & Rosen, 1981).

Data exist implicitly supporting the notion that status competition is enabled by inequality. Research on organizational compensation structures has begun to explore the proposition that inequality motivates within-group competition (e.g., Becker & Huselid, 1992; Bloom, 1999; Cowherd & Levine, 1992; Pfeffer & Langton, 1993). Within the compensation literature, there are some suggestions that pay dispersion undermines collaboration and cooperation in groups (Bloom, 1999; Cowherd & Levine, 1992; Pfeffer & Langton, 1993; for a review see Shaw, Gupta, & Delery, 2002). Pay dispersion is thought to enhance perceptions of inequity and unfairness for those low in the pay structure (e.g., Bloom, 1999), increasing dissatisfaction, resentment, and competition,
weakening social bonds, and ultimately discouraging cooperation, harmony, and a sense of common purpose (Deutsch, 1985). Indirect evidence for a relationship between pay inequality and within-group competitive strategies comes from studies demonstrating negative effects of pay dispersion on performance (e.g., Bloom, 1999; Cowherd & Levine, 1992; Shaw et al., 2002) and turnover (Bloom & Michel, 2002; Pfeffer & Davis-Blake, 1992) in interdependent work settings.

Further, Study 2 showed that status inequality was positively related to self-oriented team behaviors. Specifically, the pattern of behavior on teams with greater status inequality was more likely to reflect more selfish and less cooperative playing styles, and also more behaviors that enhanced individual status at the potential detriment to the team.

Similarly, specific competitive strategies such as interpersonal political behavior in teams may be enabled by greater status inequality. Politicking includes self-serving behaviors often intended to harm others or the group, are disharmonious and corrosive, but lack formal sanctioning from the organization (e.g., Ferris, Russ, Fandt, 1989). In contrast to more cooperative interactions, interpersonal political behaviors represent self-focused intra-group relations that disregard others’ well-being (Harris & Kacmar, 2005). Perceptions of politics are associated with psychological withdrawal (Cropanzano, Howes, Grandey, & Toth, 1997), aggressive behavior (Vigoda, 2002), alienation, and diminished interpersonal trust (Kumar & Ghadially, 1989), and are more common when individuals believe there is inequality or centralization of decision-making power at the top of an organization’s hierarchy (e.g., Andrews & Kacmar, 2001), and when there is a
steep hierarchy of authority (Aryee, Chen, & Budhwar, 2004). The rationale offered for these findings is that centralization and hierarchy limit employees’ knowledge and input into how decisions are made. However, it may also be that greater status inequality creates social distance where individuals are more uncertain of the intentions of others. In such situations, people are less trusting and more suspicious of one another, and may be more apt to perceive negative political behavior (Williams & Dutton, 1999). The personal benefits of political behavior can be status, recognition, power, control, and achievement (Vigoda, 2002), making politics potentially profitable in contexts marked by status inequalities.

*Proposition 4: Greater status inequality on a team will enable the emergence of a social structure characterized by competition.*

*Moderating Effects of Shared Cultural Values*

Our model suggests that greater status inequality on a team will enable the emergence of a social structure based on dominance, centralized decision-making, a lack of trust and collective identification, and competition, by way of influencing social cognition. We now consider moderating conditions of this relationship. In particular, we argue that the relationship between status inequality and the above elements of social structure may also be influenced by the shared cultural values of a team. Often preceding the development of social structure are the existing cultural values and pressures acting on team members (Fiske, 1991). Culture at the organizational and national levels influence the emergence of team social structure, which is embedded within these
contexts. Elements of culture can affect how status structures are perceived, and the processes by which social cognition guides social behavior. We use Hofstede’s (1980) concepts of power distance and collectivism to consider how shared cultural values moderate the relationship between status inequality and the emergence of social structure at the team level. While Hofstede (1980) originally conceptualized power distance as the degree to which imbalances in power are accepted in society, and collectivism as a measure of the value placed on interdependence within a society, these cultural values have also been shown to emerge as shared at the level of the group (e.g., Schaubroeck, Lam, & Cha, 2007; Yang, Mossholder, & Peng, 2007). Team members may develop shared cultural values for a number of reasons. Selection processes can lead individuals to join teams with values consistent with their own (Adkins & Caldwell, 2004), socialization can help newcomers adjust and act according to the values of existing group members through social norms and sanctions, and leaders can model social values through their visions and behaviors (Yang et al., 2007), all of which contribute to shared cultural values at the team level.

*Power Distance.* Team power distance may act as a moderating factor in the relationship between status inequality and social structure in two ways, namely, by influencing social cognition, and the processes by which social cognition builds patterns of social interaction. In teams that share low-power distance values, group members experience less status salience, self-definition based on status, and social distance between status stations. Formal status positions are unlikely to determine who holds
power or authority in low power-distance cultures, and teams instead value collaborative input and voice cutting across the status hierarchy (e.g., Earley, 1999). Accordingly, status is not as valuable a social asset in these cultures, and thus has less salience. Likewise, in low-power distance cultures status is not viewed as a meaningful dimension on which to judge competence and worth, and thus is not a relevant source of self-definition and social distance. Often times in these cultures low status group members, whose ideas are not presumed inexpert, directly contradict and question others with higher status.

By contrast, teams that value high-power distance are marked by strict deference to those in more powerful positions. Experimentally, Earley (1999) found that in high-power distance team cultures, high status group members were afforded greater influence, and their efficacy expectations were more closely related to those of the team overall than high status group members in low-power distance cultures. In high-power distance cultures pressures for interacting appropriately with others of different rank evoke strong schemas for behavior, and lead to very strict displays of authority and deference in a group. Under these conditions, where status is a prominent social resource, individual quests to gain higher status positions should be more common. Accordingly, power distance may influence processes of social cognition, influencing the extent to which status is salient and generates self-definition and social distance. Further, power distance may also influence the implicit rules and scripts that individuals use to interact
with others of different status, and their motivation to achieve higher status positions. Thus, we propose the following:

*Proposition 5a. Shared team power distance will moderate the relationship between status inequality and the emergence of an agonic social structure, such that greater status inequality will not be related to the emergence of an agonic social structure in teams that share low-power distance values and strongly related to its emergence in teams that share high-power distance values.*

*Collectivism.* Pre-existing shared collectivist values may also affect the process by which patterns of interaction are ingrained within teams. Collectivists use their membership in a collective in forming their identity, and prioritize the group’s welfare above individual goals or aspirations; they see themselves as connected to their other group members, as opposed to socially distant (Triandis, 2001). This phenomenon may occur because collectivists have a strong need for affiliation, which they can meet through the security of group interdependence (Hui & Villareal, 1989). Accordingly, teams that share collectivist values are more likely to develop meaningful self-definitions based on their membership in the group, and not their position within it. By extension, social structure in collectivist groups is likely to reflect these values. Collectivist groups are more likely to be characterized by strong with-in group trust and identification, and will avoid conflict, maintaining harmony among group members. In the face of conflict or status competition, collectivists would also be less likely to try to achieve relatively higher positions that distinguish them from others in the group, and would instead try to
“blend in” (Gelfand, Higgins, Nishii, Raver, Dominguez, Murakami, Yamaguchi, & Toyama, 2002). In sum, protecting cohesion is paramount in groups with strong collectivist values, and thus, we predict:

**Proposition 5b. Shared team collectivism will moderate the relationship between status inequality and the emergence of an agonic social structure, such that greater status inequality will be strongly related to the emergence of an agonic social structure in teams with weak collectivist values and unrelated to its emergence in teams with strong collectivist values.**

**Team Outcomes**

Thus far, we have argued that status inequality influences how individuals form impressions of themselves and who they are relative to others on their team, which influences the pattern of interactions that emerge within the team. Organizational scholars have called for more attention to relational theorizing in organizational research (Baron & Pfeffer, 1994; Bradbury & Lichtenstein, 2000; Emirbayer, 1997), and in response, a growing literature in organizational studies has begun to focus on the power of interactions in the workplace (e.g., Bradbury & Lichtenstein, 2000; Gelfand, Major, Raver, Nishii, & O’Brien, 2006; Jehn & Shah, 1997; Rook, 1984; Tsai & Ghoshal, 1998; Wrzesniewski et al., 2003). Our model follows this call, recognizing the deep and pervasive impact that social structure has on team outcomes. Specifically, we discuss the organizational implications of our model for learning, performance, and health and well-being in groups.
Team Learning

We propose that status inequality is negatively related to team learning through the emergence of features consistent with agonic social structures. Team learning represents advancements in knowledge acquired collectively by a team through shared experience (Ellis, Hollenbeck, Ilgen, Porter, West, & Moon, 2003), and is expressed in behaviors such as gathering information, questioning assumptions, reflection, discussing problems, and seeking diverse input (Edmondson, 1999). We suggest that social structure is foundational for team learning processes, which are by nature interdependent and evolve through interaction. A number of social conditions have been shown to enable or disrupt team learning, such as leadership (e.g., Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006), the presence of subgroups (Gibson & Vermeulen, 2003), and team autonomy (Zellmer-Bruhn & Gibson, 2006). Reagans and McEvily (2003) argued that close relationships motivate people to expend the energy necessary to share their knowledge with others, and found that cohesion and informal connections predicted the transfer of knowledge between organizational members. Dominance hierarchies, centralized decision-making, individualized identification, and competitions for status deter the offer and acceptance of diverse opinions, thereby limiting the extent to which groups capitalize on the knowledge bases of all group members, potentially impeding learning.

While teams are often formed with the goal of expanding skill and knowledge sets by helping members learn from each other, a common condition that impedes team
learning processes occurs when teams undermine the contributions of minority members and dissenters (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). Van der Vegt, Van de Vliert, and Xu (2005) use this rationale to explain their finding that teams with greater levels of functional diversity, which was theorized to mark status differences, had less innovative climates under conditions of status salience (i.e., high power distance cultures).

Psychological safety, a precursor to team learning, is a concept used to describe the “shared belief that the team is safe for interpersonal risk-taking” and stems from “mutual respect and trust among group members” (Edmondson, 1999: 354). Social structures characterized by dominance and distrust should diminish psychological safety, particularly for group members with low status, because their unique input has a higher probability of rejection. Thus, to the extent that a team’s social structure favors the input of high-ranking team members, it may constrain participation from low status group members with alternative perspectives who may come to view contributing to the group as risky. However, psychological safety may not only affect low status team members; teams with low levels of collective identification are likely to show biases against others, and will more often discount their viewpoints whether the individual is of higher or lower status (Van der Vegt & Bunderson, 2005).

Proposition 6. Greater status inequality on a team will enable the emergence of a social structure that negatively affects team learning.

Performance
We propose that social structures characterized by dominance-seeking behavior, autocratic decision-making, competition, distrust, and weak collective identification will weaken team performance on tasks that require high levels of cooperation and coordination. A team’s level of trust and collective identification can determine team members’ motivations to combine their talents and pool their resources when necessary to successfully complete interdependent tasks. Organizational research has explored the link between social capital and performance. In essence, social capital is thought to create value in organizations (i.e., Nahapiet & Ghoshal, 1997) through mechanisms such as trust and resource exchange (Tsai & Ghoshal, 1998). Similarly, research on top management teams has found positive effects of social integration and cohesion on performance outcomes such as sales growth, and return on investments and assets (Michel & Hambrick, 1992; Smith, Smith, Olian, Sims, O’Bannon, & Scully, 1994). These studies suggest that integration and collective identification ease communication, compromise, and coordination among members of the top management team, thereby helping to enhance overall performance. Similarly, psychological research has investigated how integrative relationships impact group performance. Jehn and Shah (1997) found that the performance of friendship groups, which engaged in positive communication, task monitoring, cooperation, and which were highly committed, was superior to acquaintance groups on cognitive and motor tasks.

Similarly, competitive relationships work against performance-enhancing behaviors. Studies of status competition find that, unless merit-based (i.e., earned),
striving to enhance status results in counter-productive behaviors such as conflict, using
others for personal gain, and using organizational resources inefficiently (Huberman et
al., 2004; Loch et al., 2001). Dominance is negatively related to outcome success in
conflict situations (e.g., Euwema, Kop, & Bakker, 2004), and in negotiations, dominance
makes integrative, win-win solutions less likely (Van de Vliert, 1999).

These individual performance losses will detract from team performance when
work requires interdependence. However, in cases where team members operate
independently and team performance is measured as the compilation of individual
performance, uncooperative social structures may not lead to poor performance, and may
be beneficial. Tournament theories of motivation suggest that tiered systems of
organizational rewards create the motivation for continual progress and success, the side-
effect of which is diminished relational capital and a focus on self-performance (e.g.,
Lazear, 1989). However, in instances of independent work, this self-focused source of
motivation has been shown to enhance performance (e.g., Devaro, 2006). Therefore, we
propose that:

Proposition 7. Greater status inequality on a team will enable the emergence of a
social structure that negatively affects team performance on tasks requiring high-levels
of interdependence, and positively affects team performance on tasks that do not require
interdependence.

This proposition is inconsistent with the findings of Study 2, where team
performance in the NBA (arguably a context with high interdependence) was not
significantly related to status inequality. However, the NBA may be an unfair context in which to adequately test this proposition because cooperation in basketball teams is practiced (e.g., teams practice how to most effectively work with one another on the court). More rarely do more typical teams practice cooperation, which would less often be acknowledged as a prerequisite to performance.

Health and Well-being

Indirect evidence suggests that greater status inequality may adversely affect the health and well-being of team members. Population health researchers have long been interested in the relationship between income and health and, of particular interest here, relative income and health. Many studies have shown links between a society’s level of income inequality and the health of its population (e.g., Kaplan, Pamuk, Lynch, Cohen, & Balfour, 1996; Kawachi, Kennedy, Lochner, Prothrow-Stith, 1997; Wilkinson, 2005). While the absolute wealth of nation is positively related to population health, the stratification of income among members within a nation’s population further differentiates between ‘the healthy’ and ‘the healthier’, developed nations (Wilkinson, 2005).

At the team-level, Study 2 showed a relationship between status inequality in the NBA and team absences due to physical ill-health or injury. We suggest that social structure may help to explain why status inequality is negatively related to health and well-being.
Social structures based on dominance hierarchies, centralized decision power, a lack of trust, and competition are stress provoking (Pierce & White, 2006). Group members must frequently monitor their environments in order to protect their status positions or to advance, and are likely to encounter many more conflicting relationships that influence their experiences of stress, and ultimately their health. In organizations, relationships characterized by political behaviors (e.g., Cropanzano et al., 1997; Harris & Kacmar, 2005), undermining (Duffy, Ganster, & Pagon, 2002), and a lack of social support (e.g., Karasek & Theorell, 1990), all diminish employee wellness. Similarly, exclusion from participation in group decisions leads to a lack of perceived control and job stain (e.g., Karasek & Theorell, 1990), while feeling socially isolated is a major threat to mental and physical well-being (Cacioppo et al., 2002; Rook, 1984). These findings are consistent with studies of non-human animals, where agonic social structures evoke higher levels of stress within a group (Virgin & Sapolsky, 1997).

By contrast, social integration, often marked by collective identification, trust, and participation, is health enhancing (e.g., Ryff & Singer, 2001; for a review specific to work relationships see Heaphy & Dutton, 2008). When individuals feel connected and integrated, they tend to be healthier and happier than when they feel detached from others (Seeman, 1996; 2000; Uchino, 2004). At the collective level, social capital is strongly related to health and well-being. Putnam’s (2000) exploration of trends in social capital and trust makes this link, finding that social integration protects individuals from a multitude of illnesses and diseases from the common cold to cancer. In synthesis, Putnam
describes “as a rough rule … if you belong to no groups but decide to join one, you cut your risk of dying over the next year in half. If you smoke and belong to no groups, it’s a toss up statistically whether you should stop smoking or start joining” (p. 331).

Accordingly, Wilkinson (2005) argues that income inequality may be related to population health through the effects of deteriorated social capital and cohesion, a notion that has gained some empirical support in epidemiological studies (e.g., Kawachi et al., 1997).

Proposition 8. Greater status inequality on a team will enable the emergence of a social structure that negatively affects team health and well-being.

4.3 Discussion and Future Directions

The need for more theorizing on the nature of status in organizations is clear (Pearce, 2001; Ravlin & Thomas, 2005). While status and status hierarchies characterize the social world, organizational research has been surprisingly silent about status structures in organizations. We address this void by providing a conceptual model for studying status inequality in teams that incorporates both processes of social cognition and social interaction, and has implications for team learning, performance, and well-being. In doing so, we advance theory and research in several ways.

At the outset, we integrate the sociological literature on status structures in groups with the organizational literature on teams. Given the similarities between the two – that they typically describe individuals working in relatively small groups to accomplish interdependent tasks over time – the potential contributions deriving from their synergy is
substantial, as has been recognized in recent studies (e.g., DiTomaso et al., 2007; Perretti & Negro, 2006; Van der Vegt et al., 2005). Accordingly, in merging these two literatures, the present research makes contributions to both. First, recognizing that status structures in teams may arise out of demographic attributes reflective of inequalities prevalent in society at large (which suggests that in some cases demography may be confounded with status), offers insights for the study of team composition and diversity (DiTomaso et al., 2007). Demographic attributes tend to carry status value when they are also consistent with resource imbalances in the group (e.g., Ridgeway, 2000), which may help researchers to determine when the effects of diversity will be strongest, and explain why both positive (e.g., Lant, Milliken, & Batra, 1992) and negative effects (e.g., Simons, Pelled, & Smith, 1999) of diversity have been found in the past research. Likewise, a focus on the status value of demography warrants close attention to the attributes that are chosen to measure diversity within a group, and importantly, how they combine to determine an individual’s overall status position. In general, accounting for status inequalities in teams provides additional theory to clarify the nature of team composition, and how it influences team processes, and by extension, team outcomes.

Second, our model also contributes to the sociological literature on status structures in small groups. The primary focus of such research is the emergence, continuance, and diffusion of status inequalities, and within-group effects of status differentials. We argue that the nature of the status structure itself, in this case the extent to which it is dispersed, explains between-group variation in processes and outcomes at
the team-level. In turn, these functions are likely to influence how status is defined and redefined within a group. Therefore, the extent to which status beliefs are perpetuated over time may depend in part on the characteristics of the hierarchy from which they are drawn.

Our model also contributes to team research. Multilevel organizational models typically focus on top-down processes in which macro features of the environment influence individual-level outcomes; only more rarely does research focus on bottom-up processes that describe the emergence of macro features from micro inputs, or both in combination (Kozlowski & Klein, 2000). Our model of status inequality incorporates a macro-micro-macro approach, where status inequality, a property of the group, influences individual-level cognition, from which emerges the group’s social structure. Further, our conceptualization of status inequality at the group-level captures the relational nature of status that is often neglected when status is defined as an individual-level construct only, as has dominated previous organizational research. Understanding the combination of top-down and bottom-up processes is of particular importance in teams, because teams exist at the meso-level of an organization, and thus are likely to be particularly susceptible to both the macro organizational context in which they are embedded and the micro individual forces from which they are comprised. Studying these processes separately is unlikely to provide a rich account of team-level phenomena in general, and status inequality in particular.

Future Research
Based on our model we offer several recommendations to future research on status inequality and team composition. First, the reciprocal influence of social structure on social cognition and status construction needs to be thoroughly acknowledged. However, the attributes of individuals’ social connections, and the meaning drawn from being a part of them, may affect how individuals come to make sense of their environments. For example, the social structure enabled by status inequality may reinforce perceptions of separateness and relative value, perpetuating social distance and disconnection, and the existing status hierarchy. Dutton (2003) suggests that negative, corrosive connections with others can strengthen an individual’s perception of being disrespected or undervalued by others and by the organization more broadly, which illustrates that social structure is not simply directed by social cognition, but also creates it. Similarly, status construction theory argues that status beliefs are reinforced and diffused through social interaction (Ridgeway & Erickson, 2000). Exploring these processes more deeply will clarify the role of social structure in teams.

Second, we discuss the potentially beneficial effects of greater status inequality, which may arise under conditions of low power-distance, collectivism, and task independence. However, greater status inequality may also enable less competitive social structures under other conditions as well, for example, when teams share particular relational models (e.g., Fiske, 1991), such as communal sharing, which could change their perceptions of status differentials. Greater attention to moderators of the relationship
between status inequality and social cognition, and social structure would enhance future theoretical and empirical research on status inequality.

Third, future research may benefit from incorporating time into the study of status inequality. Explicit effects of time are noteworthy. For example, while status inequality should initially enable more competitive social structures, perhaps as a team develops a shared history together, these effects fade eventually. Such an outcome would be likely if, over time, team members’ preconceptions of others occupying different status positions proved erroneous, and therefore, their perceptions of status distinctions became blurred. Group composition is also unlikely to be static with individuals joining and leaving the group, which might influence both status inequality and social structure. The simple addition and subtraction of new members may change the level of dispersion in status on a team, and future research would benefit from understanding the conditions under which such transformations would result in corresponding changes in social structure. For example, a newcomer to the team who occupies a very high status position may reenergize perceptions of status salience in the group, which by extension could alter group dynamics. The same may not be true if the individual had low status.

Fourth, while we suggest that the relationships described follow a linear pattern, other patterns may also be plausible. For example, given that status hierarchies evolve naturally even when formal structures do not exist (Ridgeway & Walker, 1995), some level of status inequality is likely to exist in all teams, helping individuals to make sense of their social environment. What might be expected then is not that the relationship
between greater status inequality and the emergence of agonic social structures progresses in a linear fashion, but instead, that until some salient and meaningful level of status inequality is reached, it goes unnoticed. In this case, a graphical representation of the status inequality-social structure relationship may be either curvilinear or show a sudden upward shift when a given level of status inequality is reached. In parallel, as status inequality becomes greater, further stratification may only marginally influence status salience and self-definition, at which point the effect of status inequality on the features of agonic social structures would begin to diminish.

Next, future research on demographic faultlines may benefit from the implications of our model. Lau and Murnighan (1998) introduced the concept of demographic faultlines to suggest that diversity may exert its strongest effects on interpersonal functioning in groups when groups are divided into a small number of subgroups characterized by similarity of demographic attributes and within-group homogeneity. Lau and Murnighan suggest that subgroups of larger size will tend to exert more power and dominance over smaller subgroups, minimizing their influence, and thus, faultlines will have more powerful negative effects when one subgroup overpowers the others in terms of size. We suggest that when faultlines are based on demographic features that carry status value, or based on status more generally, then this prediction should be reversed. Status inequality would suggest that a minority subgroup of high status individuals would dominate the group, and that their power may actually increase as status inequality becomes greater and there are fewer individuals occupying the high
status subgroup. Therefore, incorporating status as a feature on which subgroups may emerge could elaborate on the concept of faultlines and when they are strongest.

Last, locating status in a relational context requires that the group be treated as the unit of analysis for status inequality, with certain measurement implications. Specifically, researchers will need to first consider carefully the determinants of status in a given research context, and measure status as a rank within a team, not as an individual state. Status inequality is determined by the amount of dispersion within this ranking system, which should not be confused with variation in status. Harrison and Klein (2007) note that team composition research has often neglected to distinguish between the two when measuring of diversity. Inequality is best reflected in indices such as the Gini coefficient, the coefficient of variation, the Theil index, and the Atkinson index, all of which account for ranked-ordered relationships, and less suited to measures of variety, such as the Blau index. Such considerations will be critical if researchers are study differences in status inequality across teams.

Practical Implications and Conclusion

While the study of status inequality is still relatively new, some practical implications for team design do emerge from our model. In general, careful consideration should be given to team composition decisions because they directly contribute to the status structure of the team, and therefore, can affect team processes and outcomes. Similarly, composition should not be determined independently of a team’s resource structure. To the extent that status differentials are both consistent and determined by the
allocation of resources within a group, the resulting beliefs about status within the group may become more rigid. Thus, managers may benefit from using resources to mitigate the status differentials that emerge based on the formal status positions of team members. For example, team-level incentives, reductions in salary differences, and similar access to administrative support may all help to attenuate the salience of formal status distinctions.

A second way that the potentially negative effects of status inequality on team functioning can be offset is through culture. If the organization supports low-power distance and collectivist values, then status inequality will relate differently to status salience, self-definition, and social distance. If teams share strong values of equality and interdependence, status distinctions will not represent meaningful attributions of value, worth, and competence within the group, and the pressure to compete for higher status positions will be alleviated. However, cultural values need not only be derived from the broad societal or organizational culture. Managers, team leaders, and group members can all contribute to the emergence of shared cultural values through direct social influence strategies, role-modelling, or processes or selection and retention (e.g., Yang et al., 2007).

Consequently, our model suggests that managers should pay close attention to the status structures that emerge in teams based on formal status, demographic attributes, or other features of the organization. Conventional wisdom may suggest that a team stands to benefit from the incorporation of a star team member, however, this may not be the case if doing so draws attention to status differentials in the group, or where the work performed by team members is interdependent. We argue that finding a balance between
individual expertise and competencies, and managing status inequality will be necessary if managers wish to optimize group functioning and outcomes. As we noted at the beginning of this paper, one professional soccer team, the Los Angeles Galaxy, invested greatly in soccer superstar David Beckham, creating stark status differences in terms of fame and salary between members of the team. Only time will tell whether David Beckham’s talent outweighs the potential costs of inequality that may have been created.
Our conceptualization of team health and well-being parallels that of population health and well-being. Although most often measured as the average health of individuals within the population, population health is conceptually broader (e.g., Reidpath, 2005), being driven by macro risk factors (e.g., culture, policy), which create health trends that vary across populations, and is shaped by both the mean and distribution of health within the population.
4.4 References


Chapter 5
General Discussion and Conclusion

The purpose of this dissertation was to explore the role of status and status inequality in predicting health and performance. The study described in Manuscript 1 showed that socio-economic status (SES) related to work stressors and psychological resources, which were associated with physical health outcomes across time. In Manuscript 2, status and status inequality were linked to health-related absences in an empirical study, performance, and thriving in a team setting. Manuscript 3 extended these results conceptually by proposing the mechanisms through which status inequality influences organizational outcomes, and moderators of these relationships. Overall, the studies provide evidence that status processes are an integral component of organizational functioning.

Together the studies advance the literature in numerous ways. First, they respond to calls for greater attention to issues of status in organizational research (Pearce, 2001; Ravlin & Thomas, 2005). In particular, Ravlin and Thomas (2005) suggested that an understanding of status hierarchies at the meso-level of analysis is especially pertinent yet absent. While status hierarchies may operate in various ways at the meso-level, Studies 2 and 3 show that the degree to which status positions are dispersed within teams is one relevant conceptualization that deserves further attention.

Second, Studies 1 and 2 also account for the dynamic nature of individual health and well-being. Most often organizational research has captured the static properties of
these variables without suggesting how they may unfold temporally. By contrast, the study outlined in Manuscript 1 showed that individual health was responsive changes in perceived work stressors, and changed in concert with psychological resources over time. Further, players with higher versus lower status, on teams with higher versus lower levels of status inequality followed divergent trajectories of health and performance in the second study. By examining changes over time, these studies provide a rich account of organizational processes, and point to the opportunity generated by dynamic models for organizational theory and research.

Next, organizational research linking status to health has investigated SES-based social gradients. The findings of these studies have obvious theoretical and practical utility, however, because they are invariably limited to one specific conceptualization of status, they provide little insight into the health effects of status hierarchies that arise in organizations independent of SES. This dissertation demonstrates that status-based health disparities are generalizable from macro social orderings to status organizing processes in small, face-to-face teams.

Drawing on this smaller unit of analysis also allows for the operationalization of status to better reflect its definition as a relational construct. Like others, I used Berger’s (1977) approach for measuring status in small social systems (Bunderson, 2003), which derives each team member’s relative status position within the social system based on numerous characteristics. A prime component of this process involves rank-ordering individuals within the social system on each of the characteristics. Perhaps research has
failed to produce a reliable, omnibus measure of SES (e.g., Kristenson, Eriksen, Sluiter, Starke, & Ursin, 2004) because an individual’s income, education, and occupational prestige cannot be feasibly rank-ordered within a macro social system. Accordingly, SES indicators inadequately measure an individual’s overall status position and instead capture less fine-grained status distinctions on multiple salient dimensions. While this dissertation shows that both are of relevance to organizational researchers, measuring relative status in teams provides a fresh method for incorporating specific, within-organization status symbols (e.g., perks, corner offices) into the study status.

Limitations and Future Directions

Both empirical studies in this dissertation are longitudinal in nature, involving at least three observation periods. The studies also draw on large samples representative of a known population. Whilst so, each is limited by its reliance on archival sources of data, which are extensive but not designed for the purposes of testing the hypotheses outlined in the dissertation. Indeed, given the opportunity to design the databases, I would have expanded their scope. For example, the first study would benefit from a larger variety of perceived work stressor items, and direct survey data would enrich the analyses of the second study. Collecting first-hand data will likely be necessary to adequately address the propositions developed in the conceptual model presented in Manuscript 3.

A second limitation of the dissertation is that the inferences drawn are derived solely from objective indicators of status. While status distributions are thought to originate from objective or visible characteristics (Berger et al., 1980; Sauder, 2005),
subjective evaluations of status may be of equal importance. From an SES perspective; recent research suggests that an individual’s perceived level of SES predicts health and well-being (e.g., Cohen, Alper, Doyle, Adler, Treanor, & Turner, 2008). Perceived SES in these studies is typically measured by asking participants to indicate how their income, education, and occupational prestige compares to others in their country by denoting their relative rank or “rung” on an illustration of a ladder. Cohen et al., (2008) exposed healthy individuals to the common cold, and found that individuals with higher levels of subjectively rated SES were less susceptible to cold symptoms. Of interest is that these results emerged after controlling for individuals’ objective levels of SES, and that the effects of objective SES were not statistically significant after accounting for subjective SES. These results highlight the psychological aspects of status often missing from SES research: perceived relative ranking compared to others is of consequence to individuals regardless of their objective position, and thus, the conditions associated with it (e.g., job characteristics).

Open to future research is exploring the relationship between subjective SES and perceived workplace factors. Individuals who experience increasing stressors may re-evaluate their occupational prestige in light of those stressors, while individuals who experience increasingly fewer work stressors, may in turn perceive their relative rank as higher. Given that perceived SES may be more easily changed than objective SES, an opportunity exists for the discovery of additional factors that may change individuals’ perceptions of their SES. Of the common SES indicators, organizations may have the
most control over influencing perceptions of income and occupational prestige. For example, one might hypothesize that pay secrecy prompts individuals to misjudge their pay relative to others, and thus perceive their SES as lower. By contrast, organizations that provide intrinsically motivating and meaningful work may enhance individuals’ subjective perceptions of their occupational prestige, and therefore SES.

Also notable is that measures of subjective SES more closely assess the relational properties of status as compared to objective indicators of SES by both asking for an individual’s rank compared to others and defining country as the focal social system. The measure could also be adjusted to ask participants how they rank based on income, education, and occupational prestige compared to others in their organization, department, or team. Nevertheless, using SES indicators to explore relative status differences within small social systems where individuals rank similarly on the indicators is still limited.

However, using a similar measure of subjective status in teams would enrich the results obtained in Manuscript 2 derived from objective status characteristics. For instance, the NBA players in the second study could have been asked to rate their relative ranking compared to the rest of the team on each of the status indicators measured. Arguably, perceived status could be different than objective status, and of relatively greater importance. For example, players who perceive their salary to be lower than others should respond according to their perceptions, not the objective data. Similarly, how players perceive their status relative to others is more likely to drive their
interactions with their teammates. Measuring perceived status would also verify or define what constitutes meaningful distinctions in status. Again taking salary as an example, measuring a player’s perceived rank on salary could clarify a meaningful salary distinction; perhaps two players who differ in salary by $50,000, which would be incorporated into a measure of objective status, would rank their salaries as equivalent. In this case, the objective measure of status would overestimate the status distinctions between the players. These issues are left to be resolved through future research.

A second way that subjective status in teams could be measured in future research is by asking each member of the team to rate one another’s status irrespective of any objective status indicators. For instance, team members could be asked to rate every team member’s ranking in the team based on prestige, prominence, respect, and influence. The researcher would then be free to verify the level of agreement between multiple raters, and rank order the team members in terms of these subjective status evaluations. Alternatively, team members could be asked to derive a rank order of status directly. Both of these approaches could capture the subtleties of status distinctions that emerge in groups through sustained interactions, which may escape objective status measures.

While the measurement of status is a limitation of this dissertation, it is also constrained to an investigation of ill-health. Manuscript 1 focused on health problems and Manuscript 2 on absences due to illness or injury. Recent research suggests that a complete depiction of health requires acknowledging positive health and well-being outcomes. For example, well-being is not simply the absence of psychological and
physiological strains; it is also about autonomy, growth, vitality, and life purpose (e.g., Ryff, 1989). Both Manuscript 1 and Manuscript 2 fail to capture these elements of health. Accordingly, future research that explores the relationship between status, status inequality, and positive health and well-being is welcomed.

Examining the moderators of the relationships tested in this dissertation is an additional avenue for future research. For example, acquiring relatively higher status positions is likely to be differentially important to individuals (Frank, 1999), and thus, the relationship between status and health may be stronger for those who strongly value status or who have a status-striving motivation. The extent to which individuals identify with their positions or their teams could also determine how advantageous or disadvantageous a given position is to the individual. Occupying a low status position on a team to which an individual feels an emotional connection may be more harmful than occupying a similar position on a less desired team.

Perhaps holding a high status position in an alternative domain (e.g., another team, another job, family, etc.) may help individuals in low status positions protect their overall health. Ironically, Bacharach, Bamberger, and Mundell (1993) argue that the reverse may actually be true: Individuals who experience “status inconsistency” from occupying a low status position in one domain and a high status position in another domain may experience relatively greater stressors than those whose status is consistent across positions. These issues beg empirical investigation.
Moderators of the relationships between status inequality, health, and performance at the individual- and team-levels are also of interest. Some individuals may be more apt than others to enjoy working in conditions of greater status inequality, such as those who are higher in trait competitiveness and are motivated to climb the status hierarchy. Likewise, individuals who are believe that relationships should be ordered hierarchically (e.g., those who possess an “authority-ranking” model of relationships; Fiske, 1991) may fair better on teams with greater status inequality than individuals who believe that relationships should be communal (e.g., those who possess a “communal-sharing” model of relationships; Fiske, 1991).

Shared cultural values were discussed as potential moderators in Manuscript 3, however, numerous other team-level variables could influence the relationship between status inequality and outcomes, for instance, team size. Individuals should be less likely to compare themselves to others further away in the status hierarchy as the team grows larger, thus status inequality should be more problematic in smaller teams. Similarly, status inequality may be less salient in virtual teams as compared to face-to-face teams. In virtual teams, social structure may be constituted differently than proposed in the conceptual model developed in Manuscript 3 due to the limited interactions between team members. These questions are beyond the scope of this dissertation, but are exciting possibilities for future research.

A final limitation of this dissertation is its focus on one dimension of status structures: status inequality. Researchers may be as interested in other elements of status
structures in teams, such as how status structures evolve over a team’s life cycle, how status positions shift over time or across contexts, and how newcomers adapt or change existing status structures. Answering these questions will generate an enriched understanding of the function of status structures in organizations.

5.1 Summary and Conclusion

Overall, the subject of this dissertation is status and status inequality, and it maintains that these constructs have a substantive application in organizational research. In a dynamic model, the study in Manuscript 1 showed that perceived workplace stressors and psychological resources contributed to SES-based health disparities for working Canadians between 2000 and 2004. The second study focused on status differences within organizational teams, and explored the composition of status within in these teams. Specifically, in study in Manuscript 2 showed that status inequality predicted health (at the individual- and team-level of analysis), performance (at the individual-level of analysis), and individual thriving across time. Occupying a higher status position within in a team was also shown to mitigate the negative effects of status inequality on individual performance. These results extend from an archival dataset of National Basketball Association players and teams from 2000 to 2005. Upon outlining these studies in detail, the final manuscript in this dissertation provides a conceptual framework for understanding status inequality in teams and its potential implications. While the dissertation provides a needed address of status issues in organizations, much remains to be answered by future research. I hope that these studies help to inspire such research.
5.2 References


### Appendix A

**Measures used in Study 1**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work Stressors – 7-item index</strong></td>
<td>Your job requires that you do things over and over</td>
</tr>
<tr>
<td></td>
<td>You are free from conflicting demands that others make</td>
</tr>
<tr>
<td></td>
<td>Your job requires that you learn new things</td>
</tr>
<tr>
<td></td>
<td>Your job requires a high level of skill</td>
</tr>
<tr>
<td></td>
<td>Your job is very hectic</td>
</tr>
<tr>
<td></td>
<td>Your job security is good</td>
</tr>
<tr>
<td></td>
<td>Your job requires a lot of physical effort</td>
</tr>
<tr>
<td><strong>Personal Control</strong></td>
<td>What happens to you in the future depends mostly on you</td>
</tr>
<tr>
<td></td>
<td>You can do just about anything you really set your mind to</td>
</tr>
<tr>
<td></td>
<td>There is really no way you can solve some of the problems you have</td>
</tr>
<tr>
<td></td>
<td>There is little you can do to change many of the important things in your life</td>
</tr>
<tr>
<td></td>
<td>You have little control over the things that happen to you</td>
</tr>
<tr>
<td></td>
<td>You often feel helpless in dealing with problems of life</td>
</tr>
<tr>
<td></td>
<td>Sometimes you feel that you are being pushed around in life</td>
</tr>
</tbody>
</table>
Appendix B
National Basketball Association Teams and Years in Existence

<table>
<thead>
<tr>
<th>Team</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Hawks</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Boston Celtics</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Charlotte Bobcats (Hornets)</td>
<td>2004 – 2005</td>
</tr>
<tr>
<td>Chicago Bulls</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Cleveland Cavaliers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Dallas Mavericks</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Denver Nuggets</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Detroit Pistons</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Golden State Warriors</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Houston Rockets</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Indiana Pacers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Los Angeles Clippers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Los Angeles Lakers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Memphis Grizzlies</td>
<td>2001 – 2005</td>
</tr>
<tr>
<td>Miami Heat</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Milwaukee Bucks</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Minnesota Timberwolves</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>New Jersey Nets</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>New Orleans Hornets</td>
<td>2002 – 2005</td>
</tr>
<tr>
<td>New York Knicks</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Orlando Magic</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Philadelphia 76ers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Phoenix Suns</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Portland Trail Blazers</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Sacramento Kings</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>San Antonio Spurs</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Seattle SuperSonics</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Toronto Raptors</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Utah Jazz</td>
<td>2000 – 2005</td>
</tr>
<tr>
<td>Vancouver Grizzlies</td>
<td>2000</td>
</tr>
<tr>
<td>Washington Wizards</td>
<td>2000 – 2005</td>
</tr>
</tbody>
</table>