
MIT Open Access Articles

Power, status, and learning in organizations

The MIT Faculty has made this article openly available. ***Please share*** how this access benefits you. Your story matters.

Citation	Bunderson, J. S., and R. E. Reagans. "Power, Status, and Learning in Organizations." Organization Science 22.5 (2010): 1182–1194.
As Published	http://dx.doi.org/10.1287/orsc.1100.0590
Publisher	Institute for Operations Research and the Management Sciences
Version	Author's final manuscript
Accessed	Mon Jan 25 09:40:59 EST 2016
Citable Link	http://hdl.handle.net/1721.1/69925
Terms of Use	Creative Commons Attribution-Noncommercial-Share Alike 3.0
Detailed Terms	http://creativecommons.org/licenses/by-nc-sa/3.0/

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DSpace@MIT

POWER, STATUS, AND LEARNING IN ORGANIZATIONS

J. STUART BUNDERSON
John M. Olin School of Business
Washington University in St. Louis
Campus Box 1133, One Brookings Drive
St. Louis, MO 63130
Tel. (314) 935-4943
e-mail: bunderson@wustl.edu

RAY E. REAGANS
Massachusetts Institute of Technology
Sloan School of Management
50 Memorial Drive
Cambridge, MA 02142
Tel. (617) 715-4154
e-mail: rreagans@mit.edu

Forthcoming in *Organization Science,* Special Issue on
"New Perspectives on Organization Science"

Version: January 2010

The authors would like to thank Linda Argote, John Carroll, Amy Edmondson, Frank Flynn, Adam Galinsky, Kyle Lewis, Joe Magee, Ann Majchrzak, Bill McEvily, and Gerben Van der Vegt for feedback and encouragement on earlier drafts of this paper. We also thank participants in the "New Perspectives on Organization Science" conference which was held at Carnegie-Mellon University in May, 2009.

ABSTRACT

This paper reviews the scholarly literature on the effects of social hierarchy – differences in power and status among organizational actors – on learning in organizations and groups. We begin with the observation that theories of organization and group learning have tended to adopt a rational system model, a model that emphasizes goal-directed and cooperative interactions between and among actors who may differ in knowledge and expertise but are undifferentiated with respect to power and status. While a rational system model has proven quite useful in articulating how knowledge might be stored, manipulated, represented, and deployed in order to generate new knowledge and insight, it has not adequately accounted for the fact that learning in organizations is enacted within formal and informal hierarchies of power and status that shape perceptions, motivations, and behavior. We review the theoretical and empirical literature on power, status, and learning in order to identify ways in which social hierarchy can affect key learning-related processes and outcomes. Our review suggests that while power and status differences clearly present formidable challenges to collective learning, these challenges can be mitigated or even reversed when power is used to advance collective interests. Indeed, our review suggests that higher-ranking actors who use their power and status in more "socialized" ways can play critical roles in stimulating collective learning behavior. We conclude by articulating several promising directions for future research that were suggested by our review.

The domain of organizational learning research includes research on learning at multiple levels of analysis, including individuals, teams, organizations and even populations of organizations. Theoretical arguments at any level emphasize the importance of the creation, retention (e.g., memory or storage), and transfer of knowledge for goal achievement, competitiveness, and continuous improvement (see Argote, 1999). The topic of learning has generated considerable and sustained interest within the organization and management research community. As one example, there are over 3,800 references to articles published in the 1991 special issue of Organization Science on the topic of organizational learning. Huber's (1991) and Levitt and March's (1988) reviews of the organizational learning literature have been cited over 2,100 times, with a clear majority (63%) of the citations coming from articles published since 2000, suggesting that interest in organizational learning has only increased in the past decade. Moreover, we have seen an explosion of interest in issues of collective learning among groups researchers, including research on topics such as group learning curves, learning processes and behaviors, and the intra-group management of knowledge (see reviews by Argote, 1999; Argote, Gruenfeld, & Naquin, 2001; Edmondson, Dillon, & Roloff, 2007; Wilson, Goodman, & Cronin, 2007).

A review of this literature suggests that in pursuing questions related to learning in collectives, most researchers have adopted what Scott (1987) referred to as a "rational system" model. According to Scott (1987: 21), we apply a rational system model to our analysis of organizations or groups when we conceptualize them as collectivities that are "'purposeful' in the sense that the activities and interactions of participants are … coordinated to achieve specified goals" and when we assume that "cooperation among participants is 'conscious' and

'deliberate'" and focused on achieving these goals. So, a rational system approach to the question of organizational learning views member activities and interactions related to the creation, retention, or transfer of knowledge as "functional" in that they are examined in relation to the efficient accomplishment of collective goals. The analysis therefore focuses on ways in which these various interactions and activities can be structured in order to allow for the optimal acquisition, storage, retrieval, or processing of knowledge by boundedly but intendedly rational human information processors (Scott, 1987: 49).

The rational system approach to studying learning has proven extremely useful and productive. It is important to acknowledge, however, that by adopting rational system assumptions, theories of organizational learning highlight certain aspects of collective human behavior while overlooking others. Our purpose here is to highlight one set of issues that has been generally overlooked in theories of organizational learning that adopt the rational system model – the critical and pervasive role of social hierarchy in learning-related processes and outcomes. By social hierarchy, we mean "an implicit or explicit rank order of individuals or groups with respect to a valued social dimension" (Magee & Galinsky, 2008: 354). Social hierarchy derives from member differences in both power (i.e., control over resources needed or valued by others; Emerson, 1962) and status (i.e., prestige and esteem; Ridgeway, 2001). While the concepts of status and power are distinct, they tend to be tightly coupled (Lovaglia, 1995; Thye, Willer, & Markovsky, 2006; Walker, et al., 2000). Our review therefore combines research on power and status in order to examine the broader effects of social hierarchy on learning. Social hierarchy is a pervasive reality of organizational and group life given differences

across individuals and units in current and/or historic resource endowments (e.g., capital, knowledge, authority, information, network relations, experience, charisma, etc.).

Our review of the research literatures related to power, status, and learning suggested that social hierarchy complicates three key processes that play central roles in rational system models of collective learning: anchoring on shared goals, risk-taking and experimentation, and knowledge sharing. Collective learning requires that members anchor on and adjust their behavior in relation to a shared goal or set of goals, that they take risks and remain open to failure, and that they exchange information, knowledge, and perspectives with one another (Argote, 1999; Edmondson, 1999). Our review clearly indicated that power and status differences can complicate each of these learning processes and, therefore, that social hierarchy can present an obstacle to collective learning. At the same time, many, if not most, groups and organizations do manage to learn in spite of their inevitable power and status differences. Our review pointed to one key factor that can help to explain how and when the potentially stifling effects of social hierarchy on collective learning can be mitigated or even reversed – the 'socialized' use of power, i.e., power use that is directed toward collective goals and interests.

Our discussion will proceed as follows. We begin by reviewing the abundant theory and empirical evidence suggesting ways in which power and status differences can stifle collective learning. We then consider evidence suggesting that the magnitude and even the direction of these effects may be contingent on the extent to which those higher in the social hierarchy are concerned with group goals and objectives. We conclude by identifying several promising directions for future research on power, status, and learning that are suggested by our review.

POWER AND STATUS AS OBSTACLES TO LEARNING

When issues of power and status do appear in research on learning in organizations and groups, they are typically cited as obstacles or impediments to learning. Specifically, the power and status differences that exist between actors are presumed to stifle, constrain, or even distort those group and organizational processes viewed as critical for learning (e.g., Brooks, 1994; Edmondson, 2002). This section reviews the literature on power, status, and learning in order to examine the evidence underlying this concern. Our review suggested that social hierarchy does indeed throw gravel into the gears of a rational system model of learning by affecting three key learning-related processes: anchoring on shared goals, risk-taking and experimentation, and knowledge sharing.

Power, Status, and Anchoring on Shared Goals

As noted above a rational system model of collective learning assumes that individual activities and efforts are oriented toward a shared goal or set of goals. Indeed, the concepts of "learning" and "knowledge" become meaningful only in relation to some explicit or implied set of objectives (e.g., to efficiently perform a task, to maximize revenue, etc.). The rational model therefore implicitly assumes that individual members are able (and willing) to consider how their individual and interactive behavior contributes to collective goals and to regulate that behavior accordingly.

But recent research on the psychology of power and status suggests that social hierarchy may actually affect an individual's ability to engage in goal-directed learning. Guinote (2007) found, for example, that high-power individuals were better at regulating their behavior toward the achievement of goals. She explained this finding by suggesting that power is

associated with fewer constraints and greater freedom to act at will (see also Galinsky et al., 2008). As a result, individuals with power can focus attention on the task at hand whereas low-power individuals are distracted by other considerations (e.g., the actions of the powerful). Consistent with this argument, Smith, et al. (2008) found that increases in power improved executive function ability and, more specifically, the ability to update goal-relevant information and ignore goal-irrelevant information. And Overbeck and Park (2006) found that high power individuals were more aware of and adaptive to stated organizational goals. Together, these studies support the conclusion that power and status differences may compromise collective learning by reducing the capacity of those lower in the social hierarchy to acknowledge, focus on, and regulate their behavior toward achieving collective goals.

But even if we assume that group members are able to focus on collective goals, power and status considerations may affect their willingness to do so. Because the possession of unique and valuable knowledge or information gives the possessor a source of intra-organizational power, actors may be hesitant to simply share their knowledge or information without extracting some "political" advantage from doing so (Wittenbaum, Hollingshead, and Botero, 2004). Moreover, they may choose to share only certain pieces of what they know or to share their knowledge only at strategic times. Since the open exchange of knowledge and information is a key prerequisite for collective learning, these political behaviors can seriously undermine collective learning efforts (Lawrence, et al. 2005). As an example, in a reanalysis of Orr's (1996) ethnographic study of photocopier technicians, Contu and Williams (2003) highlighted ways in which technicians strategically represented and applied their knowledge of photocopier repair in order to avoid losing control over their work to managers who sought to

limit their power. Keeping photocopiers up and running (a system-level goal) was not as important as maintaining and cultivating power (an individual/group goal). Similarly, Tregaskis (2003) found that subsidiaries leveraged their internal and external "learning networks" in ways intended to maximize the strategic value of their knowledge assets (i.e., their intra-organizational power). These research findings are consistent with the notion that individual interactions can be (and often are) motivated politically and that political concerns can compromise, or at the very least influence, broader learning outcomes.

Power, Status, Risk-Taking and Experimentation

Power and status differences can also create an environment in which lower-status (power) actors do not feel safe engaging in key behaviors that facilitate learning. In order for any group to learn, individual members must be willing to make, acknowledge, and reflect on mistakes and shortcomings (their own and those of others), openly share information and perspectives, confront blind spots, consider different ideas, and experiment with unproven approaches – all behaviors that can be interpersonally risky. A number of learning scholars have proposed that in order for individuals to engage in these "risky" learning behaviors, they must feel that it is "safe" for them to do so, or that doing so will not lead to negative evaluations or sanctions (formal or informal). The evidence suggests that these perceptions of "psychological" or "participative" safety do predict learning behavior in both organizations and groups (Anderson & West, 1998; Baer & Frese, 2003; Bunderson & Boumgarden, 2009; Edmondson, 1999; Nembhard & Edmondson, 2006).

The evidence also suggests, however, that individuals in positions of lower power or status perceive their organizations and groups to be less safe for learning and risk-taking. As a

result, they behave in more tentative and inhibited ways that do not lend themselves to collective learning (Foldy, Rivard, & Buckley, 2009). So, for example, Nembhard and Edmondson (2006) found that the lower-status members of neonatal intensive care units (nurses and respiratory therapists) reported lower levels of psychological safety than higher-status members (physicians) and, as a result, were less involved in learning. Brooks (1994) found that members of R&D teams felt less free to engage in group reflection and process improvement when even one team member had power over others. And Edmondson (2002) found that power differences were negatively associated with both psychological safety and team learning in a qualitative study of twelve manufacturing, product development, and management teams in one manufacturing company.

There are at least two explanations for this tendency of lower-power individuals to feel less safe in taking learning-related risks. First, lower-power members are, by definition, more dependent on other members for valued resources such as information, budget authorization, or even respect and approval. As a result, the prospect of disapproval by others should be more threatening to individuals with lower power since that disapproval could have a real bearing on valued outcomes. In other words, the social environment for a lower-power member is not just perceived to be less safe, it really is less safe since there are more, very real threats and dangers for a lower-power member than for a higher-power member.

But second, recent research on the psychology of power has suggested that we may be hard-wired to respond in tentative and inhibited ways when we find ourselves in positions of lower power – even when there are no real social threats or dangers associated with that disadvantaged power position. A brain imaging study by Zink, et al. (2008) found, for example,

that lower social status in an unstable hierarchy activated portions of the brain associated with social anxiety, despite the fact that status was irrelevant for the outcome of the task. A study of high- and low-status rhesus monkeys by Drea and Wallen (1999) found that monkeys who had learned to perform a color discrimination task were less likely to demonstrate that knowledge when they were in a group with higher-status monkeys, despite a low incidence of aggressive behavior.

These results are consistent with a review article by Keltner, Gruenfeld, and Anderson (2003) in which they concluded that power advantages appear to prompt an "approach" response pattern (positive emotion, attention to rewards, uninhibited behavior) whereas power disadvantages prompt an "inhibition" response pattern (negative emotion, attention to threats, inhibited behavior). An impressive and growing body of research evidence supports this basic proposition. Individuals in positions of lower power experience more negative emotion (Langner & Keltner, 2008), act in more situationally-constrained ways (Galinsky, et al., 2008), are less optimistic in their assessment of risks and less likely to take risks during social interaction (Anderson & Galinsky, 2006; Magee, Galinsky & Gruenfeld, 2007), and are less likely to take initiative (Galinsky, Gruenfeld, & Magee, 2003).

In sum, the emerging evidence does support the idea that power and status differences can affect the willingness of low-power members to engage in collective learning activities by affecting their perceptions and feelings of psychological safety, their assessment of risks, and their propensity to take initiative and independent action. These behaviors are critical because they limit trial and error learning, which is essential for introducing new ideas and variation into

established work routines and practices. By inhibiting these behaviors, power and status differences can undermine learning.

Power, Status, and Knowledge Transfer

A key assumption in rational system models of learning is that collective learning is more likely to occur when group or organization members gain a broader and more robust understanding of past actions and future possibilities by utilizing the different information, insight, and perspectives of all unit members. Proactive input from individuals who bring different functional or disciplinary perspectives, who are exposed to different aspects of the task, or who interact with a different set of organizational or group stakeholders increases the ability of an organization or group to detect opportunities, correct errors, and take informed action. Moreover, differences in perspective and experience make it possible for organizational members to learn from one another through the formal or informal transfer of knowledge and best practices across individuals or units.

But this vision of collective learning from member differences assumes, first, that actors are equally willing to share their different perspectives and insights with others and, second, that the perspectives and insights of each actor will be given an equal and fair hearing. Our prior discussion of psychological safety and the inhibitions of the power-disadvantaged raises concerns about the first of these two assumptions since it suggests that those lower in the social hierarchy are less likely to proactively share their perspectives and insights. But what do we know about the extent to which power and status differences might affect the probability that the perspectives and insights of each actor will be given an equal and fair hearing? A review of the theory and research evidence related to this question does not paint a reassuring

picture. In a nutshell, past research strongly suggests that when it comes to collective learning, the perspectives and insights of the powerful are given disproportionate weight whereas the contributions of those with less power are often overlooked – even when those contributions could be important to the learning and performance of the group.

Bunderson (2003a, 2003b) found, for example, that in management and manufacturing teams where power was unevenly distributed, member experience and background had little bearing on a member's influence and decision involvement, even when that member had experience in strategically critical domains. Instead, influence and involvement in power asymmetric groups accrued to those members who were demographically similar to those in power (specifically in terms of gender, ethnicity, or functional background). Research by Westphal and Zajac (1995) on the selection of corporate board members also found that those with higher power tended to privilege those who have similar demographic characteristics. Pitcher and Smith (2001) found that demographic indicators of member knowledge in top management teams had little bearing on actual team decisions unless member power was also taken into account. And like the above studies, they observed a tendency for involvement in power-asymmetric groups to derive from demographic similarity to the ingroup (see also Eisenhardt & Bourgeois, 1988). Together, these results point to a tendency for those higher in a social hierarchy to ignore valid indicators of member knowledge and expertise within their group and to instead advance those members who are like them.

This tendency to privilege the powerful also emerges in research on patterns of assistance and helping in groups. As noted above, a rational system model of collective learning assumes that those with superior knowledge will help and advise those who know less.

Research suggests, however, that patterns of assistance and helping in groups may have more to do with relative power and status than with relative knowledge and expertise. So, for example, Van der Vegt, Bunderson, & Oosterhof (2006) found that group members were more likely to help other group members who were above them in the status hierarchy but not below. Research by Flynn, et al. (2006) and Flynn (2003) provides one possible explanation for this finding by suggesting that interpersonal helping may be as much about status enhancement as knowledge transfer; helping a higher status member is more status-enhancing than helping a lower-status member. Moreover, research by Lee (1997) suggests that status can also affect help-seeking behavior. Specifically, she finds that participants were more likely to seek help from those of equal rather than unequal status. Once again, concerns about the status implications of help seeking are presumed to underlie this effect.

Status characteristics theory provides further evidence that status differences can result in the neglect of contributions from lower status members. A key premise in status characteristics theory is that intra-group status hierarchies are largely determined by the "status value" that individuals have come to associate with member differences (Berger, Rosenholtz, & Zelditch, 1980). Individuals come to assign status value to different member characteristics through exposure to the dominant values and beliefs within the broader society and they then import those beliefs into their interactions with others in a group setting. As a result, group members with societally-disadvantaged status characteristics tend to occupy lower positions within the social hierarchy of the groups they join, which results in fewer opportunities for involvement, participation, and influence – regardless of whether they possess unique or even superior knowledge, perspective, or insight.

Ridgeway, Johnson, and Diekema (1994) found, for example, that an intra-group influence attempt by a group member with an advantaged status characteristic was viewed as more legitimate and was more successful than the same attempt by a member with a disadvantaged status characteristic, even though both members had high task ability. Thomas-Hunt and Phillips (2004) found that when an expert is female, team members were less likely to acknowledge her expertise or accept what she knows. Moreover, female experts were less likely to share what they knew. Bunderson (2003b) found that the tendency to rely on non-diagnostic but externally-advantaged status characteristics was especially pronounced in groups where power was more unevenly distributed. And research in educational settings has demonstrated that inequities in participation that result from status characteristics can significantly compromise the learning of status-disadvantaged students (see reviews in Cohen, 1984; Cohen 1994).

Finally, research on the psychological experience of power confirms that power and status can lead to the neglect of contributions from those lower in the social hierarchy. Gruenfeld et al. (2008) found, for example, that subjects primed with or placed in positions of power were more likely to treat others in instrumental ways and to ignore qualities or characteristics in others that were not perceived as goal-relevant (see also Overbeck & Park, 2006). In a related set of studies, researchers found that high-power subjects were less likely to adopt the perspective of others (Galinsky et al., 2006; Lammers, Gordijn, & Otten, 2008) or to take the situation and emotions of others into account during interaction (van Kleef et al., 2008). Together, these studies suggest that the tendency to overlook the contributions of others may be inherent in the very experience of power.

In sum, the evidence suggests that under conditions of unequal power and status, the assumption that individuals will learn from and leverage the knowledge, perspectives, and insights of different organizational members appears highly questionable. Rather, it seems clear that when relations of power and status are asymmetric, the knowledge and perspectives of those higher in the social hierarchy are advantaged over the insights of lower-ranking members. Moreover, knowledge transfer relationships tend to be more strongly homophilous in settings where power and status differences are more pronounced.

Summary: Power and Status as Obstacles to Learning

Our goal in this section has been to evaluate the suggestion that power and status differences can stifle collective learning in groups and organizations. We found that the critics of power and status in settings where learning is the goal have a compelling case. Power and status differences can a) distract members from collective learning goals, b) compromise risk-taking and experimentation, and c) decrease the open sharing and equal consideration of different member knowledge and insight. Given this evidence, it is perhaps not surprising that some scholars have concluded that power and status differences should be minimized or even eliminated when learning is the goal (Brooks, 1994; Harrison and Klein, 2007).

While we do not dispute the above evidence, we do find this conclusion to be problematic. Power and status differences exist in all organizations. Differences in power and status are the inevitable result of member or unit differences along dimensions such as formal authority, control over resources, knowledge and skill, network position, attractiveness, and reputation (Pfeffer, 1981). Moreover, power and status differences are often intentional or, at least, result naturally from intentional design decisions that introduce formal or informal

hierarchy (e.g., formal authority relations, mentor relationships, etc.). It is therefore difficult to imagine any group or organization in which power and status differences do not exist (Magee and Galinsky, 2008). As Keltner (2007: 15) has observed, "To be human is to be immersed in power dynamics". If, then, power and status are so ubiquitous and so damaging to learning, how is it that learning ever takes place? Or, to put the question more precisely, is there any evidence that collective learning can take place in organizations in spite of or perhaps even because of power and status differences? We now turn to a consideration of this question.

SOCIALIZED POWER AND LEARNING IN ORGANIZATIONS

A key theme in the research reviewed above is that power and status differences create obstacles to learning because they shift attention away from goals related to collective improvement and toward goals related to self-protection or self-enhancement, regardless of whether one is higher or lower in the social hierarchy. But there is evidence to suggest that the possession of power or status does not necessarily imply a self-serving orientation. McClelland (1975) was among the first to make this observation. He suggested that orientations toward power can be either "personalized" or "socialized". Those with a personalized power orientation see power as a means for advancing personal concerns related to domination, control, or prestige whereas those with a socialized power orientation see power as a means for advancing collective interests and concerns. As a result, personalized power leads to the direct, uninhibited, and confrontational use of power whereas socialized power leads to the indirect, restrained, and cooperative use of power. McClelland (1975) further suggested that the use of socialized power can promote member initiative and perhaps even collective improvement efforts (i.e., learning).

A careful review of (mostly recent) theory and research on power, status, and learning suggests that a socialized or collective orientation toward power and status not only mitigates the negative effects of social hierarchy on each of the learning processes reviewed above but also, and perhaps more significantly, can transform those differences into a key catalyst for learning. In other words, our review of the literature suggests that the effects of social hierarchy on goal-directed learning, experimentation and risk taking, and effective knowledge transfer are contingent on whether power is used in personalized or socialized ways. This basic model is summarized in Figure 1 and elaborated in the following sections.

- -

Insert Figure 1 about here.

- -

Socialized Power and Anchoring on Shared Goals

Our earlier review suggested that power and status differences can suppress collective learning by compromising the ability of those lower in the social hierarchy to acknowledge, focus on, and regulate their efforts toward collective goals. Those lower in the social hierarchy are less goal-directed because they lack a sense of control and must keep track of more potential threats in their social environment (Guinote, 2007). As a result, they pay attention to more of their social environment but fail to separate peripheral from central and goal-relevant from goal-irrelevant aspects of that environment (Overbeck & Park, 2001, 2006; Smith, et al., 2008).

We also know, however, that lower-status members are highly attentive to the goals, actions, and emotions of higher-status others and adjust their behavior and even their emotional responses accordingly (De Dreu & Van Kleef, 2004; Rusbult and Van Lange, 2003).

Research has suggested, for example, that exposure to a higher-status other results in more activity in areas of the brain associated with perceptual-attentional, saliency, and cognitive systems (Zink, et al., 2008). In a study of friendship dyads, Anderson, Keltner, & John (2003) found that over the course of one year, the emotional responses of low-power individuals shifted to resemble the emotional responses of a higher-power friend. And Copeland (1994) found strong evidence that individuals conform to the expectations of high-power others.

Given these tendencies, Keltner, et al. (2008) proposed that the goals, actions, and emotions of the powerful serve as a "prioritization device" in coordinating interdependent action. That is, those goals, actions, and emotions send a robust signal to lower-power members about what matters and what does not in the context of an interdependent group, thereby suggesting a standard for sorting the relevant and central from the irrelevant and peripheral. To the extent that the goals, actions, and emotions of the powerful reflect a concern with collective goals, therefore, we would expect the group as a whole to prioritize and be oriented toward collective outcomes and collective improvement.

Results from a recent study by Van der Vegt et al. (2009) are consistent with this argument. They found that the power differences that existed within a varied sample of teams in the field promoted learning behavior in teams where members received feedback about team performance but reduced learning behavior in teams where members received individual performance feedback. They suggested that group feedback promoted a collective and socialized orientation among high-power group members and that this orientation focused the group's attention on learning from performance feedback.

Our earlier review also indicated that power and status differences can compromise collective learning by diverting attention away from collective goals and toward the use of knowledge to advance power, enhance status, and promote narrow interests and self-serving agendas. To frame the issue differently, we suggested that power and status differences can compromise learning by encouraging the personalized use of knowledge. Given this reframing, it becomes fairly straightforward (even somewhat tautological) to suggest that this particular obstacle to learning is also mitigated when actors pursue socialized learning goals. Put simply, if actors are pursuing socialized goals, power and status differences are less likely to result in the personalized use of knowledge.

But the more critical and difficult question here is why we would ever expect actors to use the knowledge they possess to advance collective ends. As noted earlier, knowledge is a scarce, valuable, and heterogeneously distributed resource which provides a key source of intra-organizational power and status. Organizational actors can therefore use the knowledge they possess to enhance their power and status or to advance their own interests or the interests of their group regardless of whether doing so is in the best interests of the broader organization. Perhaps the real question, then, is why organizational actors would ever do anything but use the knowledge they possess in strategic and political ways.

One possible answer to this question is that the strategic and political use of any power advantage may ultimately undermine intra-organizational influence. Research has suggested that intra-organizational influence accrues to those members who are perceived to be a) more knowledgeable and competent and b) committed to utilizing that knowledge and competence to advance the purposes of the collective (Willer, 2009). So, for example, de Waal's research on

primates clearly suggests that power and status in chimpanzee colonies is predicted less by the self-promoting and self-interested assertion of superior strength and more by superior strength combined with a capacity to smooth conflicts, enforce norms, and promote fairness, i.e., by the socialized rather than the personalized use of power (de Waal, 1998). Keltner, et al. (2008) built on these observations related to primate hierarchies to suggest that because power and status must always be granted by those lower in the social hierarchy, and because those lower-status individuals are larger in number and have the ability to form coalitions, a given actor's power and status within a social hierarchy will always be largely determined by perceptions of that actor's ability and motivation to advance collective interests. This assertion helps to explain why individuals in structurally-advantaged positions, who possess greater knowledge and power (see Reagans & Zuckerman, 2008) and are therefore in a position to pursue personal interests at the expense of the collective (Reagans & Zuckerman, 2009), have more influence when they are concerned with collective as opposed to individual goals (Fernandez & Gould, 1994).

These arguments are also consistent with expectation states theory and research which has demonstrated that power and status in interdependent task groups are driven by the "performance expectations" that members of a group hold for one another, expectations about the capacity of each group member to help the group achieve its objectives (see reviews in Berger & Webster, 2006; Ridgeway, 2001). Research in this tradition not only finds that performance expectations strongly drive behaviors but also that these performance expectations are driven by presumed (though perhaps not always valid) indicators of task competence and not by behavioral dominance (Ridgeway, 1987) or even explicit status claims

(Webster, Whitmeyer, & Rashotte, 2004). Moreover, members who are perceived to be competent achieve more status and influence when they are also perceived to have group-oriented motivations (Ridgeway, 1982).

Research by Willer (2009) suggests that, in fact, when collective action is required, status is granted to those group members who exhibit group-oriented behavior precisely because doing so motivates and reinforces that behavior. This implies that groups will tend to monitor and maintain their status hierarchies very carefully. Results from several studies confirm this expectation. For example, research by Anderson et al. (2006) and Anderson, Ames, and Gosling (2008) suggests that individual group members have a very accurate sense of where they and others stand in the social hierarchy and are sanctioned by other members when they act in ways that are inconsistent with that standing. Moreover, research by Lammers, Galinsky, et al. (2008) suggests that when members of a group do not see the existing social hierarchy as legitimate, i.e., as serving the good of the collective, individual behavior (e.g., deference versus approach behavior) is less constrained by that hierarchy.

The above research suggests that a highly political view of learning in organizations that assumes narrowly self-interested actors who leverage their knowledge or information for status enhancement and parochial interests rather than for collective learning may be inaccurate and misleading. Instead, the above findings suggest that organizational actors who are perceived to be using the power they possess, from whatever source, to enhance their status or to promote narrow and self-serving interests may end up compromising their position in the social hierarchy and, ultimately, their ability to get anything done. This does not imply that the political use of knowledge to build or exploit power and status will ever disappear. But it does

suggest that the surest path to achieving real power and status in any organization is to demonstrate superior knowledge and competence along with a willingness and ability to use that knowledge and competence for the good of the collective. And this is true even for those who seek power and status for self-serving reasons.

Socialized Power, Risk Taking, and Experimentation

We suggested above that power and status differences can create an environment in which individuals with lower power or status feel threatened and therefore act in cautious and inhibited ways. Research by Edmondson and her colleagues suggests, however, that this effect may be contingent on the way in which individuals in positions of higher status or power utilize their advantaged position and, specifically, on whether these individuals adopt more indirect, participative, and encouraging (i.e., more socialized) interaction styles. So, for example, Nembhard and Edmondson (2006) found that "inclusiveness" by higher-status individuals in a health care setting (physicians) overcame the inhibiting effects of status differences on both the psychological safety perceptions and learning behavior of lower-status individuals (nurses and respiratory therapists). Similarly, a qualitative study of differences in learning across twelve teams (Edmondson, 2002) suggested that leaders in higher-learning teams minimized power differences and encouraged contributions from subordinates. Finally, a study of learning in cardiac surgery departments suggested that leaders mitigated the stifling effects of status differences by openly communicating goals and by signaling an openness to feedback (Edmondson, Bohmer, & Pisano, 2001). Together, these studies support the notion that individuals with greater power or status can use their social influence to create an environment

characterized by psychological safety, thereby encouraging behaviors and processes that promote learning.

A qualitative study of learning in four management teams by Bunderson and Sutcliffe (2002) suggests, however, that in order to encourage learning, high-power members must do more than create an environment where all members feel safe to take risks. The higher-learning teams in their sample had leaders who not only encouraged initiative and tolerated mistakes, but also made it clear to others that risk-taking was, in fact, expected and that reactive and cautious behavior would not be tolerated. Bunderson and Sutcliffe (2002) suggest that it is this combination of a safe environment that tolerates risks with a normative environment that requires risks that results in the greatest collective learning. Moreover, they suggest that power differences and, more specifically, a strong team leader are necessary to create these two conditions. In short, while power and status differences may initially present an obstacle to psychological safety and learning, these studies suggest that power, when harnessed for collective goals, may also provide the solution.

Socialized Power and Knowledge Transfer

We also suggested above that power and status differences present an obstacle to collective learning by privileging the perspectives and insights of the powerful and by overlooking or minimizing the contributions of those lower in the social hierarchy. Once again, recent research suggests that these tendencies may be contingent on whether the powerful have socialized or personalized goals. Overbeck and Park (2006) found, for example, that high-power individuals who were randomly assigned people- rather than product-centered goals were more rather than less attentive to others' differences. In a related study, these same

authors found that high-power perceivers were better at individuating low-power targets when they had interpersonal but not when they had organizational goals (Overbeck & Park, 2001). And Chen, Lee-Chai, and Bargh (2001) found that high-power subjects with a collective goal orientation were more (rather than less) considerate of the needs of others. These studies suggest that the tendency for those higher in the social hierarchy to overlook and deindividuate those who occupy lower positions is largely contingent on the goals of the powerful. In fact, when those higher in the social hierarchy have collective goals, or goals that require a collective input, they actually seem to be more attentive to the characteristics and perspectives of others.

Research on information sharing in groups points to yet another way that a socialized approach to power can facilitate knowledge sharing. Whereas past research has clearly suggested that members of equal-status groups have difficulty sharing uniquely-held information (Stasser, 1999), Larson, Foster-Fishman, and Franz (1998) found that in groups with members of unequal status, status-advantaged members who adopted a more participative (i.e., socialized) style were able to encourage the expression and utilization of uniquely-held information. Higher-status members facilitated the utilization of unshared information by soliciting and then explicitly acknowledging contributions from lower-status others. Moreover, when high-power members did not play this socialized influence role, the unique information possessed by lower-status members was typically either overlooked or ignored. This is consistent with research by Bunderson (2003a, 2003b) which suggests that groups pay more attention to differences in member experience and expertise when power is decentralized.

Summary: Socialized Power and Learning in Organizations

In sum, our review of the extant literature related to power, status, and learning in organizations and groups suggests that collective goals and the "socialized" use of power by higher-status members moderate the relationship between power and status differences and each of the learning processes we outlined in the above section (see Figure 1). In some cases, the effect of socialized power use is simply to mitigate the negative effects outlined earlier. But in other cases, the socialized use of power can actually leverage the dynamics of power and status for the benefit of learning. So, high-status actors with collective goals and objectives, can help lower-status others to feel safe contributing to the learning process and, moreover, can help them to feel that they must be engaged in that process. They can identify, draw out, and legitimize contributions from lower-status members. They can help lower-status actors to focus on collective improvement goals. And they are less likely to engage in the strategic or political use of knowledge. In short, the socialized use of power – particularly by high-power actors – appears to be an indispensable requirement for learning in settings where power and status differences exist and, therefore, a critical boundary condition for a rational system model of learning.

DIRECTIONS FOR RESEARCH ON POWER, STATUS, AND LEARNING

Two broad themes emerged with considerable clarity from our review of the literature related to power, status, and learning in organizations. First, power and status differences in a group or organization can lead to a variety of social and interpersonal dynamics that work against the goal of collective learning. And second, collectively-oriented goals and the socialized use of power moderate the relationships between power and status differences and

each of these obstacles to collective learning. These two themes and the direct and moderated relationships summarized in Figure 1 therefore provide a framework for organizing future research on social hierarchy and learning in organizations. But our review highlighted several additional issues and themes that suggest promising directions for future research in this area. In this section, we articulate several key directions for future research that emerged from our review and that represent critical missing pieces and promising future directions in our understanding of the role of power and status as an obstacle to or an enabler of collective learning.

Direction #1: Socialized Goals and Low-Ranking Actors

As just noted, our review strongly suggested that collective goals and the socialized use of power can significantly affect the strength and direction of the relationship between social hierarchy and processes of collective learning. In seeking to document and explain this moderated relationship, however, we have focused almost exclusively on the goals, motives, and behaviors of those higher in the social hierarchy. So, it is the group-oriented motives and actions of the powerful that overcome inhibitions, draw out differences, focus attention, and motivate collective learning. The arguments and evidence reviewed above clearly support the critical role that higher-ranking members play in encouraging collective learning through the socialized use of power. Nevertheless, one is left to wonder whether the goals, motives, and behaviors of those lower in the social hierarchy might also have some bearing on whether and how power and status differences might affect collective learning.

For example, we cited evidence above which suggests that people respond differently to being placed in a position of higher power depending on whether they have collectively- or

individually-oriented goals (Chen, et al., 2001). Could it be that people also respond differently to being placed in a position of lower power depending on their personalized or socialized power motives and goals? We might hypothesize, for example, that in the same way that high-power actors with socialized motives focus less on what higher power can do FOR them individually and more on what they can do to advance collective ends, low-power actors with socialized motives may focus less on what lower power can do TO them individually and more on what they can do for the collective. So, we might expect that lower-power actors who are more collective in their orientation will focus less on the personal risks and threats associated with their lower position in the social hierarchy and focus instead on contributing to collective goals by, for example, speaking up and taking initiative. They might be less distracted by power and status concerns and therefore more aware of and attentive to collective goals. And they should certainly be less likely to use their knowledge in strategic, political, or even passive-aggressive ways that further personal rather than collective interests (e.g., hoarding knowledge, sharing knowledge selectively). Finally, the goals and motives of low-power actors should also have an effect on the behaviors of the powerful since, as suggested above, groups are more likely to support and promote high-power actors who advance their, in this case collective, interests. In short, it seems quite likely that the personalized or socialized orientation of low-power actors could exert a significant and potentially even pervasive influence on the relationship between social hierarchy and processes of collective learning. We suggest that a systematic investigation of this possibility offers a very promising direction for future research on issues of power, status, and learning.

Direction #2: Learning in Stable vs. Unstable Social Hierarchies

Almost all of the research on power, status, and learning that we reviewed adopts a static or episodic view of social hierarchy within a group or organization. That is, the social hierarchy is taken as a reasonably fixed aspect of the social environment and no consideration is given to the extent to which that hierarchy is stable or unstable or, perhaps more importantly, whether it is viewed as stable or unstable by organizational participants. There is some evidence to suggest that this may be a critical oversight. As noted earlier, Zink et al. (2008) found that lower status was uniformly associated with activity in portions of the brain associated with perceptual-attentional, saliency, and cognitive systems. This is consistent with social psychological research suggesting that people pay closer attention to higher status others (Keltner et al., 2003). Zink et al. (2008) also found, however, that responses to being in a lower status position varied depending on whether the status hierarchy was stable or unstable. In the unstable hierarchy, exposure to a higher-status individual also engaged "regions of the brain related to emotional processing (amygdala), social cognition (medial prefrontal cortex), and behavioral readiness" (p. 273). In other words, responses to social hierarchy and to one's position in the social hierarchy appear to be contingent on whether one believes that his or her position in the social hierarchy could change (for better or worse).

Moreover, a recent study by Scheepers (2009) suggests that reactions to a stable or unstable hierarchy will differ depending on whether one is in a high-status or low-status position within that hierarchy. Using measures of biopsychosocial arousal, he found that whereas members of high status groups are threatened by an unstable hierarchy, members of low status groups are energized and challenged by that instability. Similar effects of hierarchy

on stress and arousal arise in non-human hierarchies. Sapolsky (2005) summarized evidence suggesting that, across a variety of species, individuals lower in the status hierarchy exhibit more evidence of stress when the hierarchy is stable and less stress when the hierarchy is unstable whereas individuals higher in the status hierarchy are more stressed in unstable and less stressed in stable hierarchies.

In short, the evidence suggests that when social hierarchies are unstable, high- and low-ranking actors appear to reverse roles when it comes to their approach and avoidance behavior. Lower-ranking actors become more proactive, goal-directed, and risk-seeking whereas higher-ranking actors become more reactive, defensive, and distracted. This suggests that learning and innovation in unstable social hierarchies may begin with and emerge from the lower ranks.

But what about middle-status actors? In comparison with low- and high-ranking members, the middle-status members of a social hierarchy tend to be more conforming in an attempt to demonstrate their in-group legitimacy and climb the social hierarchy (see Phillips & Zuckerman, 2001). This suggests that middle-status actors may be least likely to engage in risky learning behaviors and create innovative ideas. Moreover, this middle-status conformity effect should be even stronger in unstable social hierarchies since the prospect of mobility is greater when there is instability. We would therefore expect middle-status members to limit their learning efforts to more incremental improvements, particularly when the social hierarchy is unstable.

Together, the above studies suggest that a systematic investigation into the dynamics of learning in stable versus unstable social hierarchies promises important and perhaps even fundamental insights to advance our understanding of power, status, and learning.

Direction #3: Accounting for Power in Assessing the Learning Effects of Diversity

One of the implications of our review is that research on the learning-related consequences of diversity in power-asymmetric groups will always be underspecified if it does not take power into account. The dominant approach to conceptualizing and operationalizing diversity in organizations is based on an implicit assumption of equal power and status. That is, past research treats the background or characteristics of each member equally in evaluating (and operationalizing) the diversity of a group. This approach implicitly assumes that the different knowledge, perspectives, and insights of each group member will be equally represented in group deliberations and decisions. But our review of the literature on power and status clearly suggests that this assumption will often be invalid in groups where power and status differences exist since the perspectives and preferences of the powerful will tend to dominate discussions and influence decisions. So, what may seem like a very diverse group in terms of member characteristics may actually be a very homogeneous group in terms of the perspectives that end up influencing actual deliberations and decisions. The demographic diversity of a group must therefore be weighted by member power in order to determine the actual diversity of the group and the resulting likelihood that group diversity will result in learning and novel insight.

This is the precisely the conclusion that Pitcher and Smith (2001) reached in their longitudinal, qualitative analysis of diversity in a top management team. They found that the

diversity reflected in member backgrounds and characteristics was not a good indicator of the actual diversity reflected in team decisions because of power and status differences. When member characteristics were weighted by relative power, however, diversity became a better predictor of team outcomes. Moreover, the extent to which individual members were actively involved in decisions varied over time based on whether leaders adopted a decentralized and participative (i.e., more collective) approach to decision-making, suggesting that power-adjusted weightings are not invariant but, rather, are sensitive to the socialized use of power. These results suggest that in order to get a clear picture of the learning benefits (or costs) of diversity in settings where power and status differences exist, future research should take both social hierarchy and the socialized use of power into account.

Direction #4: The Antecedents of a Socialized Power Orientation

Given the critical moderating role that socialized power seems to play in mitigating the negative consequences of power and status differences on collective learning, a natural question for follow-up research concerns the antecedents of a socialized power orientation and, perhaps more importantly, the factors that might lead those higher in the social hierarchy to embrace a socialized power orientation. Social scientists are certainly not alone in suggesting that power and status can have problematic consequences for cooperative social behavior. Philosophers and historians have long lamented the tendency for power "to corrupt the minds of those who possess it" (William Pitt, 1770). And yet, there does appear to be variance in the degree to which high-power individuals pursue personalized versus socialized power goals (McClelland, 1975). Our natural tendency is to highlight personalized abuses of power since they are more arresting and sensational. But perhaps the question we should be

asking is not how and why power corrupts but, more importantly, how and why and under what conditions some individuals manage to avoid the corrupting effects of power and maintain a more collective orientation.

For McClelland (1975) and a number of others (Chen, et al., 2001; Keltner et al., 2008; Magee & Langner, 2008), the answer lies in stable individual or cultural differences. Put simply, this approach assumes that some people are able to maintain collective goals in spite of power and status advantages because of personality or deeply-ingrained values. McClelland's (1975) personalized versus socialized power motive is one prominent example of an individual difference grounded in personality. And research by Zhong et al. (2006) suggests that individual orientations toward power can also differ by national culture with individuals from more collectivistic cultures responding to power advantages in more socialized ways.

In contrast, several of the studies cited above offered evidence to suggest that a personalized or socialized power orientation can be cued by an experimenter or by characteristics of the situation (e.g., Overbeck & Park, 2001, 2006; Ven der Vegt et al., 2009). This implies that the key is not just to find the right sort of people but also to understand and create the right sorts of conditions. Van der Vegt et al. (2009) suggested that these conditions might include the individual or collective nature of feedback, goals, incentives, and norms, whether members are task and/or outcome interdependent, and whether members face a common external threat.

We might also expect to observe a more socialized approach to power use in settings where the social hierarchy is determined solely by group members (e.g., self-organizing teams). In such settings, individuals who lack a collective orientation are unlikely to be granted or to

maintain higher status since there is no external authority to counter the tendency for group members to withdraw their support from self-interested members (Willer, 2009). Finally, since groups and organizations operate in a social context (O'Leary et al., 2009), reputations matter and those individuals (leaders or members) who develop a reputation as "team players" will find it easier to recruit or to be recruited. Thus, as noted earlier, socialized power use and a collective orientation are not simply the result of idiosyncratic individual differences and/or preferences but can also serve a very "rational" purpose – particularly in settings where the social hierarchy emerges from the bottom up.

Conclusion

Power and status differences are pervasive in organizations and have important and far-reaching implications for perceptions, motivations, and behavior. And yet, past research on learning in organizations and groups has tended to overlook the implications of power and status differences, building instead from a set of rational system assumptions that may be inappropriate for settings where power and status differences exist. In this manuscript, we have summarized past theory and research on the relationship between power and status differences and the various behaviors and processes related to collective learning. Our review confirms the importance of explicitly considering social hierarchy in our theories of collective learning, points to the significance of socialized power motives, and highlights several promising directions for future research on these critical dynamics.

REFERENCES

Anderson, C., D.R. Ames, S.D. Gosling. 2008. Punishing hubris: The perils of overestimating one's status in a group. *Personality & Soc. Psych. Bull.* **34**: 90-101.

Anderson, C., A.D. Galinsky. 2006. Power, optimism, and risk taking. *Eur. J. of Soc. Psych.* **36**: 511-536.

Anderson, C., D. Keltner, O.P. John. 2003. Emotional convergence between people over time. *J. of Personality & Soc. Psych.* **84**: 1054-1068.

Anderson, C., S. Srivastava, J. Beer, S. Spataro, J. Chatman. Knowing your place: Self-perceptions of status in face-to-face groups. *J. of Personality & Soc. Psych.* **91**: 1094-1110.

Anderson, N. R., M. A. West. 1998. Measuring climate for work group innovation: Development and validation of the team climate inventory. *J. of Organ. Behavior*, **19**: 235-258.

Argote, L. 1999. *Organizational Learning: Creating, Retaining, and Transferring Knowledge*. Norwell, MA: Kluwer.

Argote, L., D. Gruenfeld, C. Naquin. 2001. Group learning in organizations. In M.E. Turner (Ed.), *Groups at Work: Theory and Research*, 369-411. Mahwah, NJ: Lawrence Erlbaum.

Baer, M., M. Frese. 2003. Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *J. of Organ. Behavior*, **24**: 45-68.

Barnard, C.J., N. Luo. 2002. Acquisition of dominance status affects maze learning in mice. *Behavioural Processes*, **60**: 53-59.

Berger, J., S. J. Rosenholtz, M. Zelditch, Jr. 1980. Status organizing processes. *Annual Rev. of Sociology* **6**: 479-508.

Berger, J., M. Webster, Jr. 2006. Expectations, status, and behavior. In P.J. Burke, ed., *Contemporary Social Psychological Theories*, 268-300. Stanford: Stanford University Press.

Blackler, F., S. McDonald. 2000. Power, mastery, and organizational learning. *J. of Management Stud.* **37**: 833-851.

Brooks, A. 1994. Power and the production of knowledge: Collective team learning in work organizations. *Human Resource Development Quart.* **5**: 213-235.

Bunderson, J. S. 2003a. Team member functional background and involvement in management teams: Direct effects and the moderating role of power centralization. *Acad. of Management J.* **46**: 458-474.

Bunderson, J.S. 2003b. Recognizing and utilizing expertise in work groups: A status characteristics perspective. *Admin. Sci. Quart.* **48**: 557-591.

Bunderson, J.S., Boumgarden, P. 2009. Structure and learning in self-managed teams: Why 'bureaucratic' teams can be better learners. *Organ. Sci.* In Press.

Bunderson, J. S., K. M. Sutcliffe. 2002. Why some teams emphasize learning more than others: Evidence from business unit management teams. H. Sondak, vol. ed., E.A. Mannix, M.A. Neale, series eds. *Research on Managing Groups and Teams: Vol 4. Toward phenomenology of groups and group membership*, 49-84. Elsevier Science, Oxford.

Chen, S., A.Y. Lee-Chai, J.A. Bargh. 2002. Relationship orientation as a moderator of the effects of social power. *J. of Personality & Soc. Psych.* **80**: 173-187.

Cohen, E.G. 1982. Expectations states and interracial interaction in school settings. *Ann. Rev. of Sociology*. **8**: 109-235.

Cohen, E.G. 1994. Restructuring the classroom: Conditions for productive small groups. *Rev. of Educ. Research*. **64**: 1-35.

Contu, A., H. Willmott. 2003. Re-embedding situatedness: The importance of power relations in learning theory. *Organ. Sci.* **14**: 283-296.

Coopey, J., J. Burgoyne. 2000. Politics and organizational learning. *J. of Management Stud.* **37**: 869-885.

Copeland, J.T. 1994. Prophecies of power: Motivational implications of social power for behavioral confirmation. *J. of Personality & Soc. Psych.* **67**: 264-277.

Cyert, R.M., J.G. March. 1963. *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.

De Dreu, C.K.W., G.A. Van Kleef. 2004. The influence of power on the information search, impression formation, and demands in negotiation. *J. of Experiment. Soc. Psych.* **40**: 303-319.

de Waal, F.B.M. 1998. *Chimpanzee Politics: Power and Sex Among Apes*. Baltimore: Johns Hopkins University Press.

Drea, C.M., K. Wallen. 1999. Low status monkeys ''play dumb'' when learning in mixed social groups. *Proc. Natl. Acad. Sci.* **96**: 12965-12969.

Edmondson, A. C. 1999. Psychological safety and learning behavior in work teams. *Admin. Sci. Quart.* 44: 350-383.

Edmondson, A. C. 2002. The local and variegated nature of learning in organizations: A group-level perspective. *Organ. Sci.* 13: 128-146.

Edmondson, A.C., R.M. Bohmer, G.P. Pisano. 2001. Disrupted routines: Team learning and new technology implementation in hospitals. *Admin. Sci. Quart.* **46**: 685-716.

Edmondson, A. C., J. R. Dillon, K. Roloff. 2007. Three perspectives on team learning: Outcome improvement, task mastery, and group process. In J. P. Walsh, A. P. Brief, eds. *Acad. of Management Ann.* **1**: 269-314. Abingdon, UK: Routledge, Taylor, & Francis Group.

Eisenhardt, K. M., L.J. Bourgeois. 1988. Politics of strategic decision-making in high-velocity environments: Toward a midrange theory. *Acad. of Management J.* **31**: 737-770.

Emerson, R. M. 1962. Power-dependence relations. *Amer. Sociological Rev.*, **27**: 31-41.

Fernandez, R.M., R. V. Gould. 1994. A dilemma of state power: Brokerage and influence in the national health policy domain. *American J. of Sociology.* 99: 1455-1491.

Flynn, F. 2003. How much should I help and how often? The effects of generosity and frequency of favor exchange on social status and productivity. *Acad. of Management J.* **46**: 539-553.

Flynn, F., R. Reagans, E. Amanatullah, D. Ames. 2006. Helping one's way to the top: Self-monitors achieve status by helping others and knowing who helps whom. *J. of Personality & Soc. Psych.* **91**: 1123-1137.

Foldy, E.G., P. Rivard, T.R. Buckley. 2009. Power, safety, and learning in racially diverse groups. *Acad. of Management Learn. & Ed.* **8**: 25-41.

Galinsky, A.D., D.H. Gruenfeld, J.C. Magee. 2003. From power to action. *J. of Personality & Soc. Psych.* **85**: 453-466.

Galinsky, A.D., J.C. Magee, D.H. Gruenfeld, J.A. Whitson, K.A. Liljenquist. 2008. Power reduces the press of the situation: Implications for creativity, conformity, and dissonance. *J. of Personality and Soc. Psych.* **95**: 1450-1466.

Galinsky, A.D., J.C. Magee, M.E. Inesi, D.H. Gruenfeld. 2006. Power and perspectives not taken. *Psych. Sci.* **17**: 1068-1074.

Gruenfeld, D.H., M.E. Inesi, J.C. Magee, A.D. Galinsky. 2008. Power and the objectification of social targets. *J. of Personality & Soc. Psych.* **95**: 111-127.

Guinote, A. 2007. Power and goal pursuit. *Personality & Soc. Psych. Bull.* **33**: 1076-1087.

Haas, M.R. 2006. Knowledge gathering, team capabilities, and project performance in challenging work environments. *Management Sci.* **52**: 1170-1184.

Harrison, D. A., K. J. Klein. 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32: 1199-1228.

Huber, G.P. 1991. Organizational learning: The contributing processes and the literatures. *Organ. Sci.*, **2**: 88-115.

Keltner, D. 2007. The power paradox. *Greater Good*, **4**: 14-17.

Keltner, D., D.H. Gruenfeld, C. Anderson. 2003. Power, approach, and inhibition. *Psych. Rev.* **110**: 265-284.

Keltner, D., G.A. Van Kleef, S. Chen, M.W. Kraus. 2008. A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Adv. in Experiment. Soc. Psych.* **40**: 151-192.

Lammers, J., A.D. Galinsky, E.H. Gordijn, S. Otten. 2008. Illegitimacy moderates the effects of power on approach. *Psych. Sci.* **19**: 558-564.

Lammers, J., E.H. Gordijn, S. Otten. 2008. Looking through the eyes of the powerful. *J. of Experiment. Soc. Psych.* **44**: 1229-1238.

Langner, C.A., D. Keltner. 2008. Social power and emotional experience: Actor and partner effects within dyadic interactions. *J. of Experiment. Soc. Psych.* **44**: 848-856.

Larson, J.R., Jr., P.G. Foster-Fishman, T.M. Franz. 1998. Leadership style and the discussion of shared and unshared information in decision-making groups. *Personality & Soc. Psych. Bull.* **24**: 482-495.

Lawrence, T.B., M.K. Mauws, B. Dyck, B., R.F. Kleysen. 2005. The politics of organizational learning: Integrating power into the 4I framework. *Acad. of Management Rev.*, **30**: 180-191.

Lee, F. 1997. When the going gets tough, do the tough ask for help? Help seeking and power motivation in organizations. *Organ. Behavior & Human Decision Processes*, **72**: 336-363.

Levitt, B., J.G. March. 1988. Organizational learning. *Annual Rev. of Sociology*, **14**: 319-340.

Lovaglia, M.J. 1995. Power and status: Exchange, attribution, and expectation states. *Small Group Research*, **26**: 400-426.

Magee, J.C., A.D. Galinsky. 2008. Social hierarchy: The self-reinforcing nature of power and status. In J.P. Walsh, A.P. Brief, eds., *Acad. of Management Ann.*, **2**: 351-398. Abingdon, UK: Routledge, Taylor, & Francis Group.

Magee, J.C., A.D. Galinsky, D.H. Gruenfeld. 2007. Power, propensity to negotiate, and moving first in competitive interactions. *Personality & Soc. Psych. Bull.* **33**: 200-212.

Magee, J.C., C.A. Langner. 2008. How personalized and socialized power motivation facilitate antisocial and prosocial decision-making. *J. of Res. in Personality* **42**: 1547-1559.

McClelland, D.C. 1975. *Power: The Inner Experience*. New York: Irvington.

Nembhard, I. M., A. C. Edmondson. 2006. Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *J. of Organ. Behavior* **27**: 941-966.

O'Leary, M.B., M. Mortensen, A. Wooley. 2009. Multiple Team Membership: Productivity and Learning Effects for Individuals, Teams and Organizations. Working Paper, Boston College University.

Orr, J.E. 1996. *Talking About Machines: An Ethnography of a Modern Job*. Ithaca, NY: ILR Press.

Overbeck, J.R., B. Park. 2001. When power does not corrupt: Superior individuation processes among powerful perceivers. *J. of Personality & Soc. Psych.* **81**: 549-565.

Overbeck, J.R., B. Park. 2006. Powerful perceivers, powerless objects: Flexibility of powerholders' social attention. *Organ. Behavior & Human Decision Processes* **99**: 227-243.

Pfeffer, J. 1981. *Power in Organizations*. Marshfield, MA: Pitman.

Phillips, D.J., E.W. Zuckerman. 2001. Middle-status conformity: Theoretical restatement and empirical demonstrations in two markets. *American J. of Sociology* 107: 379-429.

Pitcher, P., A.D. Smith. 2001. Top management team heterogeneity: Personality, power, and proxies. Organ. Sci. **12**: 1-18.

Reagans, R. & Zuckerman, E. 2008. All in the family: reply to Burt, Podolny, and van de Rijt, Ban, and Sarkar. *Indus & Corp Chnge*. **17**: 979-999.

Reagans, R. &Zuckerman, E. 2009. Short-cut to efficiency? The implications of a small-stratifiedworld. Working paper, The Sloan School of Management, MIT.

Ridgeway, C.L. 1982. Status in groups: The importance of motivation. *Amer. Sociological Rev.* **47**: 76-88.

Ridgeway, C.L. 1987. Nonverbal behavior, dominance, and the basis of status in task groups. *Amer. Sociological Rev.* **52**: 683-694.

Ridgeway, C. 2001. Social status and group structure. In M.A. Hogg, R.S. Tindale, eds., *Blackwell Handbook of Social Psychology: Group Processes*, 352-375. Malden, MA: Blackwell.

Ridgeway, C.L., C. Johnson, D. Diekema. 1994. External status, legitimacy, and compliance in male and female groups. *Soc. Forces* **72**: 1051-1077.

Roome, N., F. Wijen. 2006. Stakeholder power and organizational learning in corporate environmental management. *Organ. Stud.* **27**: 235-263.

Rusbult, C.E., P.A.M. Van Lange. 2003. Interdependence, interaction, and relationships. Annual Rev. of Psych. **54**: 351-375.

Sapolsky, R.M. 2005. The influence of social hierarchy on primate health. *Sci.* 308: 648-652.

Scheepers, D. 2009. Turning social identity threat into challenge: Status stability and cardiovascular reactivity during inter-group competition. *J. of Experiment. Soc. Psych.* **45**: 228-233.

Scott, W.R. 1987. *Organizations: Rational, Natural, and Open Systems*. Englewood Cliffs, NJ: Prentice-Hall.

Smith, P.K., N.B. Jostmann, A.D. Galinsky, W.W. van Dijk. 2008. Lacking power impairs executive functions. *Psych. Sci.* **19**: 441-447.

Stasser, G. 1999. The uncertain role of unshared information in collective choice. In L. L. Thompson, J. M. Levine, & D. M. Messick, eds., *Shared Cognition in Organizations: The Management of Knowledge*: 49-69. Mahwah, NJ: Lawrence Erlbaum.

Thye, S.R., D. Willer, B. Markovsky. 2006. From status to power: New models at the intersection of two theories. *Soc. Forces*, **84**: 1471-1495.

Tregaskis, O. 2003. Learning networks, power and legitimacy in multinational subsidiaries. *Internat. J. of Human Resource Management*, **14**: 431-447.

Van der Vegt, G.S., J.S. Bunderson, A. Oosterhof. 2006. Expertness diversity and interpersonal helping in teams: Why those who need the most help end up getting the least. *Acad. of Management J.* **49**: 877-893.

Van der Vegt, G.S., S.B. de Jong, J.S. Bunderson, E. Molleman. 2009. Power asymmetry and learning in teams: The moderating role of performance feedback. *Organ. Sci.,* In Press.

van Kleef, G.A., C. Oveis, I. van der Löwe, A. LuoKogan, J. Goetz, D. Keltner. 2008. Power, distress, and compassion: Turning a blind eye to the suffering of others. *Psych. Sci.* **19**: 1315 – 1322.

Walker, H.A., S.R. Thye, B. Simpson, M.J. Lovaglia, D. Willer, B. Markovsky. 2000. Network exchange theory: Recent developments and new directions. *Soc. Psych. Quart.*, **63**: 324-337.

Webster, M., Jr., J.M. Whitmeyer, L.S. Rashotte. 2004. Status claims, performance expectations, and inequality in groups. *Soc. Sci. Res.* **33**: 724-745.

Westphal, J.D., E.J. Zajac. 1995. Who shall govern? CEO/board power, demographic similarity, and new director selection. *Admin. Sci. Quart.* **40**: 60-83.

Willer, R. 2009. Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Rev.*, 74: 23-43.

Wilson, J.M., P.S. Goodman, M.A. Cronin. 2007. Group learning. *Acad. of Management Review*, **32**: 1041-1059.

Wittenbaum, G.M., A.B. Hollingshead, I.C. Botero. 2004. From cooperative to motivated information sharing in groups: Moving beyond the hidden profile paradigm. *Comm. Monographs* **71**: 286-310.

Wong, S., V.T. Ho, C.H. Lee. 2008. A power perspective to interunit knowledge transfer: Linking knowledge attributes to unit power and the transfer of knowledge. *J. of Management* **34**: 127-150.

Zink, C.F., Y. Tong, Q. Chen, D.S. Bassett, J.L. Stein., A. Meyer-Lindenberg. 2008. Know your place: Neural processing of social hierarchy in humans. *Neuron*, **58**: 273-283.

Zhong, C., J.C. McGee, W.W. Maddux, A.D. Galinsky. 2006. Power, culture, and action: Considerations in the expression and enactment of power in East Asian and Western societies. In E. A. Mannix, M. A. Neale, & Y. Chen (Eds.), *Research on Managing Groups and Teams* (Vol. 9, 53-73). Greenwich, CT: Elsevier Science Press.

FIGURE 1. Power, Status, and Learning in Organizations.

