New Directions in Management and Organization Theory

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Edited by

Jeffrey A. Miles

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INTRODUCTION

As I was writing my book, *Management and Organization Theory*, I noticed that the field of management was lamenting the lack of new management and organization theories. For example, I saw that articles in the Academy of Management journals were discussing a serious shortage of new theories, and were contemplating the impact of this shortage on the future of the field of management and organization studies. I pondered what the field could do to help management researchers create new theories. It occurred to me that someone needed to have a conference.

In September of 2012, I went to see Lewis Gale, Dean of the Eberhardt School of Business at the University of the Pacific, where I am a faculty member. I asked him if we could host the world's first management theory conference. The motto of the university has always been "pioneer or perish" and my dean has always worked hard to ensure that the business school is on the cutting edge of innovation in the field of business, so of course he gave me permission to have a conference.

We named the conference the First Management Theory Conference. The purpose of the conference was to help address the shortage of new management and organization theories. The mission of the conference was to facilitate, recognize, and reward the creation of new theories that advance our understanding of management and organizations. We wanted to motivate researchers to create new theories and to provide researchers with a supportive forum where those new theories could be presented, discussed, and published. The conference was held at the University of the Pacific in San Francisco on September 27 and 28, 2013.

Naturally, hosting a conference involves a great deal of time, resources, and sweat equity. Since this was the first conference of its kind in the world, it also involved a certain amount of risk (and stress) as we had no idea if the conference would attract enough interest from management researchers to be successful. Fortunately, management researchers from all over the world responded to the call for papers by submitting ideas for new theories. Additionally, professors were extremely gracious with their time in helping us review submissions.

The conference was also a great success because we had an excellent support team from many individuals at the University of the Pacific. I am very thankful for the help that I received from those in the Eberhardt

School of Business. I extend my thanks to the management faculty for their help reviewing papers and chairing sessions at the conference: Julia Dare, Stefanie Naumann, Chris Sablynski, Dara Szyliowicz, and Dan Wadhwani. I also thank faculty members Tom Brierton and Wenjing Ouyang for their help reviewing papers.

I am especially thankful for the outstanding assistance that I received from the talented support staff at the Eberhardt School of Business. Operations Manager, Rebecca Davis, provided much needed assistance with financial matters, operations, and procedures, for which I am extremely grateful. Administrative Assistant, Sandy Miller, helped with a number of activities for the conference, including awards, catering, and transportation. Multimedia and Design Specialist, Myrna Vick, provided truly outstanding graphics support services, including designing the conference logo, creating the conference website, creating the conference program, and designing the conference lanyards and nametags. Director of Information Services, Mary Nevis, provided IT assistance, including email address, and mass communication and marketing support. Lastly, Faculty Administrative Assistant, Barbara Garcia, provided excellent administrative support, including help with the conference program and nametags. I cannot thank the staff enough for their moral support and encouragement, especially during the many extremely busy and stressful moments before, during, and after, the conference.

I am also extremely thankful for the outstanding assistance that I received from the Arthur A. Dugoni School of Dentistry, University of the Pacific, where the conference was held in San Francisco. First, let me thank the Dean of the Dugoni School, Patrick Ferrillo, for graciously allowing us to host the conference on his campus. We could not have held such a successful conference if it were not for the generosity of Dean Ferrillo. I am also truly thankful for the tremendous support that we received from the staff of the Dugoni School. I cannot express how grateful I am for the amazing help that I received from Administration Coordinator, Karen Yamamoto. Karen provided invaluable help with the facilities at the Dugoni School, including scheduling, parking, catering, signage, coordinating staff and events, and managing equipment and technology in the classrooms. Educational Media Support Technician, Sandra Martino, provided excellent IT support and ensured that all of the technology worked successfully in the classrooms. Building Operations Technician, Robert Pullinger, handled all manner of things in and around the building during the conference, such as managing parking, setting up and tearing down equipment, and maintaining the building environment. Security Corporal, Emilio Fastidio, provided excellent safety and security services for everyone attending the conference. Director of Planning, Roy Bergstrom, also helped ensure that everything flowed smoothly in the facilities. In sum, we thank everyone at the Dugoni school who attended to our needs, and made us feel especially welcome at the conference.

I am extremely grateful to Patrick Lastowski for the tremendous support that he provided to this conference. I cannot thank him enough for the multitude of roles that he played and the number of activities that he performed, including: transporting resources to and from the conference, arranging equipment and signs, greeting faculty, distributing conference programs and nametags, coordinating staff members and their services, guiding faculty and speakers to their destinations, handling problems and issues, cleaning up at the end of the conference, providing much needed moral support, and doing numerous other things that needed to be done during the conference.

I thank Eberhardt School of Business students: Lucas Bach-Hamba, Chennette Carter, Teddy Crepineau, Mario Giannecchini, Hanna Gremp, Diana Hsiao, Junaid Khan, Jesse Kim, Yee Lao, Zhaosong Li, Ashleigh Loew, Beatriz Maya, Danielle Rinck, Sokcon Tim, and Rory Tokunaga. The students did a tremendous job representing the university on a world stage in the field of management. We received tremendous praise for the passion, knowledge, and abilities of our students. I thank them for helping make this conference so successful and so special.

Lastly, I would like to thank and acknowledge University of the Pacific Provost Maria Pallavicini and President Pamela A. Eibeck for their support and encouragement of this conference. The Provost and the President are working tirelessly to help the university fulfill its mission, which is to provide a superior, student-centered learning experience. Additionally, they are working diligently to help the university achieve its vision, which is to create a leading California university that prepares graduates for meaningful lives and successful careers. By supporting and encouraging events such as this conference, the Provost and the President continue to make great progress toward accomplishing the mission and vision of the University of the Pacific.

—Jeffrey A. Miles
December 2013
Stockton, California, USA

OVERVIEW

Theory is the currency of our scholarly realm (Hambrick, 2007). Every top-tier management journal requires a theoretical contribution for a manuscript to be published (Corley & Gioia, 2011). A number of organization and management journal editors, such as the editors of the Academy of Management journals, have commented on the lack of new management and organization theories. A special topic forum in the *Academy of Management Review* noted that most of the theories used by contemporary management researchers were formulated several decades ago, mostly in the 1960s and 1970s, and these theories have persisted, largely intact, since that time (Suddaby, Hardy, & Huy, 2011). This is so despite massive growth and change in the size, prevalence, and influence of organizations in modern society. Unfortunately, management and organization theories have become a “living museum of the 1970s” (Davis, 2010: 691). This situation has become so dire that Amy Hillman, *Academy of Management Review* editor, commented “What is the future of theory?” (Hillman, 2011).

The purpose of the First Management Theory Conference was to help address the shortage of new management and organization theories. The mission of the conference was to facilitate, recognize, and reward the creation of new theories that advance our understanding of management and organizations. We wanted to host a conference that would motivate researchers to create new theories and to provide researchers with a supportive forum where those new theories could be presented, discussed, and published.

This volume is a collection of the best seventeen papers from the First Management Theory Conference based on reviewer ratings and comments. Chapter Seventeen was the winner of the Wiley Outstanding New Management Theory Award, which was presented at the conference. This volume also contains written summaries of the two keynote addresses that were given at the conference by Roy Suddaby (editor of *Academy of Management Review*) and Jeffrey Pfeffer, which comprise Chapters Eighteen and Nineteen.

I would like to note that the seventeen papers were not categorized in any way, such as by their “micro” or “macro” approach. Some researchers believe that there is a great divide or conflict between researchers who primarily explore micro levels of analysis and those who primarily explore macro levels of analysis (Huselid & Becker, 2011). However, some researchers believe that there is less of a divide than is often assumed (Rousseau, 2011). Indeed, many researchers agree that one of the most critical challenges in the field of management and organization research is finding ways to integrate micro- and macro-level research methods and theories (Aguinis, Boyd, Pierce, & Short, 2011).

One of the goals for this conference was to help integrate all of the theories of management and organization. In order to help accomplish this goal, I specifically did not label any of the theories as primarily micro- or macro-level in focus for this volume. All of the theories contained herein are important for all students, researchers, and theorists, and for all kinds and types of research, so I wanted to avoid perpetuating the divide that some of the theories tend to be micro-level theories and some tend to be macro-level theories.

The volume begins with Chapter One by Kannan Srikanth, Sarah Harvey, and Randall S. Peterson. They provide an enhanced theoretical framework for studying performance in diverse groups. They propose that diverse groups' lack of common ground makes them more susceptible to coordination failure, poor performance, and ultimately interpersonal problems (e.g., low trust and poor communication), and that this is a more fundamental reason for low performance in diverse groups than the motivation losses traditionally emphasized in the group diversity literature.

Bin Zhao, Fernando Olivera, and Amy C. Edmondson are the authors of Chapter Two. Building on theories of learning from errors, emotions, self-regulation, motivation, and coping, they propose a model to explain that negative emotions have both stimulating and impairing effects on learning from errors. Their model acknowledges the differential effects of discrete negative emotions on learning from errors.

Chapter Three was written by Jack A. Goncalo and Verena Krause. They focus on a static view of the creative process and review evidence that narcissists can contribute to group creativity. They uncover three critical gaps, suggesting that research: 1) focuses narrowly on one stage of the creative process while neglecting other stages, 2) neglects the fact that events in one stage can impact subsequent stages, and 3) assumes a dynamic process that is not tested empirically. They propose a dynamic model that addresses these gaps and generates a series of novel propositions.

The next paper, Chapter Four, is by Emma Y. Zhao and Karen A. Jehn. They propose that emergent leaders are more likely to cause more conflict compared to assigned leaders due to their difference in power and capability. They present a new framework through which a leader's selfentitlement is likely to affect the relationship between emergent leadership and conflict by exacerbating relationship and process conflict, but ameliorating task conflict. Their model incorporates leader conflict management behaviors (forcing and problem-solving) to moderate the link between conflict and team performance.

Chapter Five was written by Tyler Wry and Jeffrey G. York. Extending work on identity and entrepreneurship, they combine insights from structural and institutional views to develop the concept of the entrepreneurial self. They present a theoretical framework for understanding the role of the entrepreneurial self in the creation of new ventures that provide non-economic benefits.

Rebekah Dibble and Cristina Gibson were the authors of Chapter Six. They examine ways in which emerging forms of collaborative work are critically distinct from traditional forms of organizing. They identify fluidity, impermanence, organizational independence, and environmental volatility as four key features which set collaborative efforts apart from traditional teams. They explore important aspects of collaborative work (internal and external adjustment) that cannot be adequately understood by generalizing from traditional forms.

Chapter Seven was written by Anette Mikes and Robert S. Kaplan. Based on a ten-year field project and over 250 interviews with senior risk officers, they propose a contingency theory of enterprise risk management (ERM) that identifies potential design parameters that can explain observable variation in the “ERM mix” adopted by organizations. They outline a minimum necessary contingency framework enabling empirical researchers to hypothesize about “fit” between contingent variables, such as risk types and the ERM mix, as well as hypothesize about outcomes such as organizational effectiveness.

Yally Avrahampour is the author of Chapter Eight. He introduces an alternative, relational, framing of agency, which is illustrated through an analysis of a particular type of agent, namely, the manager of the defined benefit pension fund. He advocates that the pension manager uses ambiguity to mediate between two principals with conflicting objectives; shareholders and beneficiaries, allocating resources between these two principals and thus facilitating take-up of defined benefit pension provision. In the paper, he proposes that financial sociology is a discipline using a socio-cultural perspective in reformulating agency models.

Chapter Nine was written by Jeffrey Miles. He integrates concepts from the field of medicine with the study of organizations in a new area called Organizational Medicine. The paper argues that some organizations live longer, healthier lives than other organizations because they are better able to overcome organizational illnesses and diseases. He examines twelve organizational diseases and presents two models: 1) a model of organizational population health change, and 2) a model of potential health changes for an individual organization. Lastly, he discusses the need for development and use of organizational quality of well-being (OQWB) scales.

The next chapter was authored by Chester S. Spell and Katerina Bezrukova. Chapter Ten presents a multi-level theory of health management in organizations. They present a model with testable propositions and a research agenda that contributes to understanding of the employer's role in health management, and highlights implications for managers.

Chapter Eleven was authored by Dorota Leszczyńska and Erick Pruchnicki. The paper highlights the link between the transfer of knowledge flows and the location of a multinational company. The authors elaborate a model that provides a better understanding of the impact of embedded knowledge on the efficiency of a localization choice made by a multinational company.

The authors of Chapter Twelve were Tammy L. Madsen, Jennifer L. Woolley, and Kumar Sarangee. They offer theory and propositions regarding how a firm can structure interactions and manage community engagements to facilitate product innovation. They propose methods through which a firm may enhance value creation in the context of product innovation.

Chapter Thirteen was written by Gongming Qian, Lee Li, and Stephen Tallman. This paper proposes that firms use strategic alliances mainly to share resources, costs, and risks, but that this may not be the main rationale for strategic alliances in dynamic environments. This work argues that the possibilities of firms forming strategic alliances are positively correlated with their internal inertia (routinized behavior, organizational structure, age and size).

The next chapter, Chapter Fourteen, was authored by Leigh Anne Liu, Karen D. Loch, and David C. Bruce. They argue that managers need to develop political wisdom, like the mafia's *consiglieri* (an advisor to a mafia boss on political relationships), to effectively navigate the complex maze of government/business relations in emerging markets such as China. They discuss political wisdom in the context of business diplomacy in the global business environments.

Chapter Fifteen was written by Matthew B. Perrigino, who proposes Family Centrality Theory (FCT). The theory explains how the values of a family-central individual translate into action as these individuals navigate the daily challenges of work. He advocates that limiting the amount of time spent working and utilizing flexible work arrangements are the two proposed mechanisms through which these individuals can reduce their amounts of work-family conflict and maximize time spent with family.

Next is Chapter Sixteen, which was authored by Andaç T. Arıkan. He conceptualizes cluster macrocultures as the manifestations of the extent to which identity orientations of the firms inside a cluster are convergent. He offers a conceptual model that outlines the process by which cluster macrocultures emerge and transform. He focuses on the dyadic exchange relationships inside clusters as the nexus of cluster macrocultures, and Arıkan outlines the process by which cluster firms' identity orientations transform as cluster firms collect social proof as to the appropriate ways of approaching negotiation situations during relational practices.

The authors of Chapter Seventeen, Chris P. Long, Sim B. Sitkin, and Laura B. Cardinal, were the winners of the Wiley Outstanding New Management Theory Award, which was presented to them at the conference for this outstanding work. In their paper, they present a theory to explain the drivers of managerial efforts to promote trust, fairness, and control. They theorize how superior-subordinate conflicts stimulate managers' concerns about managerial legitimacy and subordinate dependability in performing tasks. They hypothesize how managers attempt to address these concerns using trustworthiness-promotion, fairness-promotion, and control activities. Lastly, they discuss how their theory refines and extends organizational trust, fairness, and control research.

The last two chapters, Chapter Eighteen and Chapter Nineteen, contain written summaries of the two keynote addresses that were given at the conference. Both of these addresses are excellent examinations of the state of management theory and development. Chapter Eighteen was written by Roy Suddaby, editor of *Academy of Management Review*. He disagrees with the growing consensus that management research has serious ills that could be resolved if we got back to hard empirical data collection and the accumulation of managerial knowledge. He argues that critics of management theory are largely taking issue with fetishistic theory or theory that has become ritualized, mechanical, artificial, and rationalized. He examines three defining elements of fetishistic theory: 1) rationalism, 2) scientism, and 3) self-reflexivity. He advocates that the creation of an indigenous approach to management theory would: 1) balance rationalism and empiricism with a clear mandate toward abduction, 2) be more attentive to the phenomena of management, and 3) create space and legitimacy within our profession for a higher degree of self-reflexivity.

Finally, he notes that we need to develop a more discriminate taste for what constitutes good, and bad, theory.

The final chapter in the volume, Chapter Nineteen, was written by Jeffrey Pfeffer and examines the management theory morass, a sprawling, vast, and sometimes redundant set of ideas. He argues that our obsession with new theory over measurement has led to some predictable consequences: a proliferation of theories, studies of little social importance, a lack of demonstrable progress in knowledge development, the articulation of ideas that may not be testable, a lack of evidence-based management, and various degrees of academic misconduct. He argues that the solutions to the management morass require some fundamental changes in how we evaluate and review colleagues and how we practice science, and may require moving to a more open reviewing process. Lastly, he argues that we need to be more self-reflective and much more aware of the downsides of our preoccupation with management theory.

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CHAPTER ONE

COORDINATION FAILURE: A MISSING LINK IN UNDERSTANDING PERFORMANCE IN DIVERSE GROUPS

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Abstract

This paper provides an enhanced theoretical framework for studying performance in diverse groups. Specifically, we argue that existing work has largely under-appreciated the coordination challenges posed by group diversity. We propose that diverse groups' lack of common ground makes them more susceptible to coordination failure, poor performance, and ultimately interpersonal problems (e.g., low trust and poor communication), and that this is a more fundamental reason for poor performance in diverse groups than the motivation losses traditionally emphasized in the group diversity literature.

Keywords: diversity, coordination, common ground

Introduction

Why do some diverse groups outperform homogenous groups, while others severely underperform? Globalization and increased worker mobility have caused a great urgency in understanding the answers to this question.

This has resulted in an explosion of research on the effects of group diversity of all types (e.g., functional diversity, individual differences, demographic differences, etc.) and has generated significant insight into the paradox of diverse group performance (see Guzzo & Dickson, 1996; van Knippenberg & Schippers, 2007; and Williams & O'Reilly, 1998 for reviews).

Existing research on group diversity has uncovered two opposing forces that influence their performance. Group decision making and creativity both benefit from the variety in the backgrounds, resources, information and skills of group members (e.g., Bantel & Jackson, 1989; Brophy, 1998; Cox & Blake, 1991; and Thompson, 2003). However, diversity is also associated with a lack of cohesion and other interpersonal problems – social divisions between members with salient differences reduce communication and cohesion, increase conflict, and reduce motivation to engage with the team (Lau & Murnighan, 1998; Williams & O'Reilly, 1998). This research stream implies that, by striking a fine balance between the benefits and challenges of diversity, diverse groups can reliably outperform homogeneous groups. Nevertheless, empirical research consistently finds that diversity impairs overall group performance (Williams & O'Reilly, 1998; van Knippenberg and Schippers, 2007). We broaden theory in this area in an attempt to better explain why diverse groups tend to underperform relative to their potential and why some diverse groups perform much better than others.

We specifically propose that the current literature on diverse teams has underestimated the challenges associated with successfully managing diversity. We argue that apart from losses arising from social categorization, diverse groups also suffer from coordination losses. Coordination losses arise from the mis-alignment of group members' actions. We argue here that diverse groups (as opposed to homogeneous groups) have difficulty coordinating their efforts due to a lack of common ground – that is, discrepancies in the knowledge, beliefs and assumptions of group members. We argue that coordination failure is at the heart of the problems faced by diverse teams, but coordination mistakes are often misidentified as arising from interpersonal problems (e.g., low trust, lack of information sharing, etc.) between group members – and this usually creates additional interpersonal problems. We specifically suggest that there are three direct effects of diversity on team performance, rather than the two typically suggested in the literature: 1) the positive effects of informational diversity on decision making and creativity, 2) the negative effects of social category diversity on interpersonal dynamics, and now we would add, 3) the negative effects of lack of common ground on the group's ability to coordinate action.

Interestingly, these three effects are consistent with Steiner's (1972) argument that group performance results from process gains and two types of processes losses – those pertaining to lack of motivation and those that result from poor action alignment or coordination. Research on group diversity has principally concentrated on motivation losses and neglected coordination losses. We believe it is essential to consider both types of losses in order to move the field forward.

The two sources of process losses in diverse groups are highly intertwined and therefore the underlying causes of the "diversity discount" may be difficult to prise apart empirically, but we think the effort is worthwhile in order to facilitate additional ways of improving the performance of diverse groups that are increasingly important in modern work organizations.

The Existing State of Play on Group Diversity – Information Gains Versus Social Categorization Losses

Diversity has been conceptualized as a double-edged sword (cf. Milliken & Martins, 1996). On one hand, diversity should improve group performance because differences in knowledge and perspectives help groups to develop new and emergent knowledge (Argote, 1999). Group members with different backgrounds and experiences are likely to have access to different information and alternative points of view on the group task. This enables them to develop a more complete understanding of the task, access relevant information, and adopt task appropriate strategies (Bantel & Jackson, 1989; Cox & Blake, 1991; Milliken & Martins, 1996; van Knippenberg, De Dreu, & Homan, 2004).

On the other hand, diversity foments social categorization behaviors that lead to interpersonal problems. Group members tend to categorize one another on the basis of salient characteristics and to identify themselves with a related social category that promotes their self-esteem. Group members then view those not in their category as different from themselves (Hogg & Terry, 2000; Tajfel, 1970; 1981). Social categorization leads to poor group processes such as reduced identification, less information transfer, less participation in decision making, increased conflict and lower cohesiveness (Jehn, Northcraft, & Neale, 1999; Keller, 2001; Pelled, Eisenhardt & Xin, 1999; Pelled, Ledford & Mohrman, 1999; Williams & O'Reilly, 1998).

The causal chain suggested by this literature is that when diverse team members first get together, they tend to identify with others in the group who are similar to themselves. This leads to more interaction within subgroups and little interaction across different sub-groups. The initial lack of communication becomes reinforced over time, resulting in lack of trust and increased conflict between subgroups. Sub-optimal group processes may also lead to a lack of motivation towards the task, as group members feel more committed to their subgroup than the larger team. Ultimately, poor group processes reduce group performance.

The information processing and social categorization perspectives that are applied to diverse teams generally do not show any clear relationship between diversity and performance (see van Knippenberg & Schippers, 2007, for a comprehensive review). Research has therefore turned to identifying variables that modify this relationship. Solutions for improving diverse group performance focus on enabling diverse groups to transcend social categorization, avoiding the consequent interpersonal and group process problems, thereby achieving superior performance. For example, Earley & Mosakowski (2000) suggest that to be effective, diverse teams need to abstract away from individual identities and build a third culture within the team that offers a *common sense of identity* and provides a basis for team interaction. Other remedies include having a cooperative norm (Chatman & Flynn, 2001), a psychologically safe communication environment (Gibson & Gibbs, 2006), or a strong organizational culture that emphasizes what members have in common rather than what makes them unique (Chatman, Polzer, Barsade, & Neale, 1998; Homan, et al., 2008). Van der Vegt & Bunderson (2005) demonstrate directly that identifying with the team improves the performance of diverse groups.

However, there are reasons to look beyond common identity as a normative solution to diverse group performance problems. In their review, van Knippenberg and Schippers (2007, p. 526) suggest "few studies directly assessed social categorization processes and the results are inconsistent enough to raise doubts about the extent to which social categorization is in operation." They suggest that the empirical results observed could also be consistent with simple misunderstanding and disagreement. In the sections below, we fill this gap in the group diversity literature by developing a theory of the antecedents and consequences of coordination failure in groups.

Analyzing Coordination Failure in Groups

In order to perform effectively, groups must minimize two types of potential process losses – those that result from lack of motivation and those that result from lack of coordination (Steiner, 1972; Simon, 1947). Motivation problems result when group members' incentives are not aligned. This may occur because members have private goals or it may be more subtle, occurring because group members lack commitment to the team and shirk team-level responsibilities. The interventions for improving diverse group performance suggested in prior research typically are geared toward addressing this motivation problem, since many scholars believe that motivation problems are more likely in diverse groups than in homogenous groups (e.g., Chatman & Flynn, 2001; Chatman, et al., 1998; and Lovelace, et al., 2001).

Coordination is achieved by the alignment of group members' actions. Coordination involves dividing work between group members, re-integrating work and deciding how to spend the group's time and resources (Hackman, 1987). We define coordination as an outcome in which interacting individuals achieve reciprocal predictability of action[1] (Camerer, 2003; Heath & Staudenmayer, 2000; March & Simon, 1958; Simon, 1947). In contrast to motivational issues, coordination failure results from an inability (rather than an unwillingness) to work together effectively. Simon's memorable example is that a group of highly motivated boat builders will not be successful unless they are all working to the same blueprint (Simon, 1947, p. 8).

Several scholars have suggested that organization theory has significantly underestimated the issue of coordinating, assuming that incentive alignment automatically achieves action alignment or coordination (Grant, 1996; Heath & Staudenmayer, 2000). However, prior studies have shown that even highly motivated groups who want to coordinate with one another suffer lower performance because they neglect group processes that foster coordination (Camerer, 2003; Camerer & Knez, 1996; Heath & Staudenmayer, 2000). Research from across a range of disciplines suggests that coordination problems between group members arise due to lack of common ground or mutual knowledge –

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[1] Often the term coordination is used both to denote this outcome as well as the process by which this outcome is achieved. Here, we exclusively use the term coordination to refer to the outcome and use the terms "coordinating" or "coordination process" to refer to the process by which a coordinated outcome is achieved.

knowledge that is shared and known to be shared (Camerer, 2003; Schelling, 1960).

Common ground differs from closely related terms such as team mental models and shared mental models in that by definition anything in common ground is shared and *known to be shared*. Clark (1996) argues that common ground arises from two sources of prior knowledge: (1) knowledge of categories, such as those based on nationality, race, gender, culture, profession, residence, hobby, religion etc., called *common ground*, and (2) prior interaction experience, called *personal common ground*.

We believe it is more fruitful to analyze coordination as a function of common ground than as a function of communication, because doing so allows us to understand more precisely when (accidental) mis-coordination occurs, especially when applied to diverse teams. Specifically, there are three sources of coordination problems in groups. First, diverse group members who are unfamiliar with each other are likely to hold differing beliefs about what actions are expected from each other (Camerer, 2003). Second, diverse team members are more likely to have problems communicating with each other (Cronin & Weingart, 2007). Finally, diverse team members tend to have problems re-integrating sub-tasks (Heath & Staudenmayer, 2000).

It is important to note that these three challenges of coordination suggest that common ground improves coordination in groups, and therefore, lack of common ground may be as important a reason for coordination failure in groups as loss of motivation. In addition, coordination failure from these three reasons can arise in groups quite independent of misalignment of goals and incentives. Our primary contention is that *coordination in groups is improved when members share common ground.* We argue that diverse groups are more likely than homogeneous groups to lack common ground and, therefore, viewing diversity through a common ground lens can provide insight into their underperformance.

Viewing Group Diversity through a Common Ground Lens

Coordination is difficult for all groups; for diverse groups, coordination is likely to be even more of a challenge. Diverse groups are likely to have low initial stocks of both communal and personal common ground and are likely to have more difficulty than homogeneous groups generating additional common ground. Therefore, diverse groups face an increased hazard of coordination failure when compared with homogenous groups.

Below we argue that diverse groups have a greater challenge overcoming the three causes for coordination failure discussed above.

1. Diverse Group Members Will Have Differing Beliefs Regarding Expected Actions.

Since group members with diverse affiliations and backgrounds have different perspectives, both their expectations about the beliefs and actions of others will differ greatly. While having different perspectives is a benefit of diversity, it is also one of the costs – the more member motivations differ, the more likely conflict and sub-goal pursuit in groups will emerge (e.g., how many resources are put into surveillance systems).

However, here we wish to concentrate on a more subtle issue – even when group members do *not* actually differ in goals and motivations, but belong to diverse sub-groups, sub-group members are likely to believe their goals and motivations are different (Phillips & Lloyd, 2006; Tajfel, 1970). Diverse group members are likely to have little communal common ground with members of other sub-groups. Therefore, they are more likely to rely on stereotypes to infer the attitudes of socially distinct others than they would when making inferences about in-group members (Ames, 2004; Clement & Krueger, 2002; Krueger & Zeiger, 1993). Since our stereotypes regarding out-group members tend to be less accurate than in-group members (Judd & Park, 1993; Denrell, 2008) diverse group members may misunderstand one another's positions and preferences.

Benefits from informational diversity arise to the extent that diverse group members' beliefs and preferences are articulated, discussed and converged on. If these process differences are unshared or assumed, it may not be possible to understand how each member of the group approaches the joint task, resulting in coordination losses. This principle was recognized by Simon (1947) in his boat building example: the blueprint for the boat serves to standardize decision premises, since everyone believes that each individual builder will make appropriate decisions based on the blueprint.

It is important to note that inability to predict expected actions in this case does not occur due to diversity in goals, but due to diversity in beliefs about goals and the means to achieve those goals. Even if every group member has identical goals (e.g., to build a boat), but each believes that others have different goals, or if group members do not understand how each other's actions contribute to the goal, coordination losses are likely to manifest. As Simon points out:

> Even a cooperative pattern may be unstable if each participant is unable to predict what the other is going to do. In these cases, coordination of the behaviors of the two participants is necessary in order that they realize the possibility that they both prefer. *Here conflict of aims is not the question, but imperfect knowledge"* (Simon, 1947; p81; our emphasis).

In addition, because there is more variance in diverse group members' beliefs about motivations and actions and since there is likely to be more variance regarding the possible approaches to attain these goals, members of these groups are also more likely to be wrong in their assumptions of what others in the group will do. Therefore, we propose:

> **Proposition 1a**: Diverse groups are more likely to hold incorrect beliefs about each others' motivations and expected actions than homogenous groups.

> **Proposition 1b**: Diverse groups will have greater difficulty predicting one another's actions than homogeneous groups.

2. Diverse Group Members Will Have Problems in Effective Communication.

Researchers have tended to assume that the lack-of-knowledge-problem identified above is fairly easily resolved through adequate communication. Folk wisdom suggests that teams could always communicate with each other to build common ground thereby achieving coordination. However, communication itself is a coordination game as research in psycholinguistics demonstrates (Clark, 1996). Camerer (2003) observes that the "assumption that communication solves all coordination problems is wrong in practice and wrong in theory."

This folk wisdom is especially deceptive in the diverse team context. Diversity research has generally assumed that the problem for diverse groups is simply an unwillingness to communicate. The real problem is as likely to be that diverse teams have greater difficulty in using communication to generate common ground since they may not have adequate initial stocks of common ground to make communication very effective (cf. Cronin & Weingart, 2007). For example, specialists may occupy different "thought worlds" (Dougherty, 1992), which makes it difficult for them to communicate. Therefore, even after attempts at communication, differences in interpretation remain – which Cronin & Weingart (2007) call "representational gaps."

Communication is difficult in diverse teams for two reasons. Firstly, group members fail to recognize that they lack common ground, and secondly they over-estimate the effectiveness of communication. In the first instance, group members may not communicate sufficiently, not because they lack the motivation, but because they are unaware of the information needs of their colleagues (Camerer, Loewenstein & Weber, 1989; Heath & Staudenmayer, 2000). Second, diverse team members are also likely to overestimate the available stocks of common ground based on any commonly shared characteristic (e.g., membership in the same firm, social community, or functional background) and are likely to discount the differences that other features of diversity create in shared understanding. For example, virtual team members take for granted that individuals in other locations share similar experiences to themselves since they are part of the same project (Cramton, 2001; Kohler and Berry, 2007).

Finally, even when group members recognize lack of common ground, they generally overestimate the efficacy of communication in achieving perfect understanding. As Dougherty (1992) and Bechky (2003) illustrate, members from different thought-worlds have their own schemes of reference, which they use to interpret any communication and inhibits shared understanding from arising even after diligent efforts at communication. This is a difficult problem to solve, since often enough diverse group members do not recognize that gaps in understanding exist, and even when it is recognized, communication is frequently less effective than assumed in bridging these gaps.

Proposition 2a: Diverse groups will have less overlap in their knowledge than homogeneous groups.

Proposition 2b: Diverse groups are more likely to underestimate the amount of coordination required for understanding one another than homogeneous groups.

3. Diverse Groups Are More Likely to Experience Integration Problems.

Finally, diverse groups are likely to have more integration problems than homogenous groups. Heath and Staudenmayer (2000) argue that most groups, especially groups with functional diversity are likely to exhibit partition focus and component focus – where they focus most of their effort on division of labour and improving individual components rather than reintegrating these sub-tasks into the whole. The problems of divergence in expectations and the inadequacy of communication will further exacerbate these problems leading to poor integration of effort across the team members. Therefore, we propose:

> **Proposition 3**: Diverse groups are more likely to have integration problems than homogeneous groups.

In summary, diverse groups are likely to hold a wider variety of beliefs about one another's motivations and actions, leading to an inability to predict one another's actions; to have less common knowledge available for communication, making misunderstandings more likely; and to lack knowledge of how to integrate sub-tasks, making integration problems more likely. In combination, this suggests:

> **Proposition 4**: Coordination failure is more likely in diverse groups than in homogeneous groups.

The Dynamics of Coordination Failure

Coordination failure directly impairs group performance, but it also has indirect effects on the nature of future group interactions. Diverse groups typically do not appreciate the fundamental causes of coordination failure, and are likely attribute these problems to other causes. In particular, group members are likely to mis-attribute coordination problems as motivation problems (Armstrong & Cole, 2002; Crampton, 2001; Heath & Staudenmayer, 2000; Wageman, 2003). Once motivational attributions are made, members behave in ways that exacerbate the underlying coordination failure, for example, by withholding communication, which leads to further process losses[2].

Anecdotal evidence suggests that the misattribution of coordination problems as motivation problems is pervasive (Armstrong & Cole, 2002; Crampton, 2001; Heath & Staudenmayer, 2000; Wageman, 2003). For example, both Cramton (2001) and Armstrong & Cole (2002) find that in virtual teams, small issues escalate suddenly into major conflicts and cause serious group dysfunction. Accidental coordination mishaps, such as forgetting to copy emails to a member of the remote team, are interpreted as purposeful and deliberate attempts to cut others out of an information flow. The “aggrieved” party then retaliates by withholding his or her information. This leads to a vicious cycle in which relationship conflict increases and information transfer decreases (Armstrong & Cole, 2002).

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[2] The misattribution problem we highlight is different from the conflict that arises from representational gaps that Cronin and Weingart (2007) discuss. They argue that conflict arises because members tend to value their own representations as superior to that of out-group members and may therefore be unwilling to alter their work plans. Here we do not assume motivated lack of cooperation.

Cramton (2001) provides another example of how small coordination errors can cause major interpersonal issues in teams. In project teams, members from country A initially sent messages to some members of the team in country B, but not others because they had incorrect email addresses. Country B members failed to share this information, and the excluded team members presumed that the country A members “lacked interest” and did not involve them fully in their future discussions. Country A members, on the other hand, only saw an attempt to exclude them. These ill feelings lingered throughout the duration of the project, ultimately causing both poor interpersonal relations and poor performance.

Diverse teams provide a setting in which this type of mis-attribution process is more likely to occur. Because diverse groups lack common ground and also typically lack awareness of this deficiency, small coordination errors may be interpreted as members lacking trust or competence, lacking commitment to the group, or other motivational factors (cf. Simons & Peterson, 2000, on the misattribution of task conflict as relationship conflict). Moreover, the resulting interpersonal problems between group members – lack of trust, decreased communication, and increased conflict – look very much like the interpersonal problems caused by social categorization processes that are often blamed for the poor performance of diverse groups. What we suggest here is that while these interpersonal problems may not be the ultimate cause of performance problems in diverse groups – instead, they may be triggered by coordination failures that result from lack of common ground.

> **Proposition 5a**: In diverse groups, it is more likely that accidental coordination failures result in poor interpersonal relationships than in homogenous groups.

> **Proposition 5b**: In diverse groups, it is more likely that poor interpersonal relationships lead to further deliberate coordination failures than in homogenous groups.

In other words, the causality implied in typical explanations of diverse group performance may actually be reversed. Rather than interpersonal problems leading to decreased coordination, which in turn causes lower performance, coordination failures can also lead to interpersonal problems that further disrupt group process and ultimately reduce performance. Whether this spiral gets initiated or not determines whether the diverse team performance improves or deteriorates with time. We suggest that this explains the large variance in performance empirically observed in diverse teams.

Discussion and Implications

We began our paper by asking the question of why some diverse groups outperform others. Our answer, of course, is that diverse teams in which members develop common ground will outperform those who do not develop common ground. Specifically, teams that do not resolve the coordination failure spiral will experience poor performance. This stands in contrast to the existing literature on diverse teams that largely argues that poor performance results from social categorization processes that cause motivational disengagement and misalignment between group members (cf. Chatman, et al., 1998; see van Knippenberg & Schippers, 2007 for a review). We argue that groups often suffer from coordination neglect – even highly motivated individuals behave in ways that make coordinating more difficult, leading to poor group performance (cf. Heath & Staudenmayer, 2000). Rather ironically, we also suggest that the groups literature as a whole suffers from coordination neglect, largely ignoring an alternative path through which diversity interferes with group performance. We hope that our paper brings coordination questions center-stage in group research and becomes fruitful for understanding group processes and performance in diverse teams. If, as we argue, the problems of diversity can best be understood in terms of coordination failures resulting from a lack of common ground, then there are a number of important theoretical and practical implications that flow from this theoretical perspective.

From a theoretical point of view, there are at least three interrelated implications of our work. Firstly, our model unpacks the process through which diversity exerts its influence on group performance, allowing for the reinterpretation of existing findings on diversity in a way that can reconcile its conflicting results. Secondly, the model suggests the potential for research into a new set of moderators that facilitate performance in diverse groups. Thirdly, our work implies that when common ground does not exist, surface level differences can be an important trigger for ensuring that the benefits of diversity are realized (i.e., contrary to the traditional