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THE RELATIONSHIP BETWEEN DIVERSITY AND PERFORMANCE IN MAJOR
LEAGUE BASEBALL TEAMS: CONFLCIT'S MEDIATING EFFECT

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The Faculty of the Department of Psychology

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In Partial Fulfillment

of the Requirement for the Degree

Master of Science

by

Michelle Maureen Campion

December 2011

The Designated Thesis Committee Approves the Thesis Titled

THE RELATIONSHIP BETWEEN DIVERSITY AND PERFORMANCE IN MAJOR
LEAGUE BASEBALL TEAMS: CONFLCIT'S MEDIATING EFFECT

by

Michelle Maureen Campion

APPROVED FOR THE DEPARTMENT OF PSCHOLOGY

SAN JOSE STATE UNIVERSITY

December 2011

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ABSTRACT

THE RELATIONSHIP BETWEEN DIVERSITY AND PERFORMANCE IN MAJOR
LEAGUE BASEBALL TEAMS: CONFLCIT'S MEDIATING EFFECT

by Michelle Maureen Campion

Diversity in the workplace is a growing reality around the world as the globalizing
economy has prompted the growth of work teams comprised of individuals from
diverse backgrounds with different values, experiences, knowledge, and skills.
Researchers have been investigating the way diversity impacts organizational
outcomes, including performance. However, it is not clearly understood how diversity
impacts performance. Using data from 30 Major League Baseball teams over a two-
year period, this research proposed that conflict might mediate the relationship between
diversity and performance. Both diversity and performance were measured using
multiple indicators. Although results did not indicate that conflict mediated the
relationship between diversity and performance, they showed that several diversity
variables were related to performance variables. Implications of the findings are
discussed.

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This thesis is the result of the efforts put forth by numerous individuals. First, I would like to thank Katerina Bezrukova and Chester Spell for sparking my interest in diversity research and their generous offer to allow me to use the data I collected for them for my own work. I would also like to thank Megumi Hosoda for her patience and dedication in providing excellent recommendations in the development of this thesis topic and her incredibly helpful attention to detail during the revision process. Her approach to my thesis always left me energized to do my best work! I am also extremely grateful for Howard Tokunaga's assistance in helping me re-think my introduction of the diversity literature relevant to my study, his recommendations regarding the analysis of my data, and his general knack for explaining things so logically! A special thanks must also be extended to Harriet Pila for her comments on my final draft as they were instrumental in validating the content of my paper. I would also like to thank my fellow classmates for their support throughout this process. I greatly appreciated the advice you shared, the suggestions you made, and the encouragement you gave!

Last but most certainly not least, I would like to thank Scott and his family, my Mom and Dad, Elizabeth, Heather, Ryan, Ashlynn, Grandma, and my entire extended family for cheering me on during every step of this process. I am incredibly thankful for your ever present encouragement to stick to the goals I had set for myself. I know that I could not have completed this great task without your love and support!

TABLE OF CONTENTS

LIST OF FIGURES

Introduction

The workplace is becoming increasingly diverse as globalization and growing

competition necessitate a workforce consisting of individuals with different backgrounds,

experience, and knowledge to maximize competitive advantage (Ragins & Gonzalez,

2003). Evidence suggests that diversity in the workplace is strategically beneficial as it

has the potential to increase creativity and innovation, which is likely to impact

performance positively (Basset-Jones, 2005; Richard 2000). Yet, some literature findings

suggest that the relationship between diversity and performance is negative. Studies

show that diversity decreases group cohesiveness which in turn leads to poor

performance (e.g.,, Jehn & Chatman, 2000).

Diversity and performance have received considerable attention in the literature as

indicated by reviews and meta-analyses focused on the relationship between these two

variables (Williams & O'Reilly, 1998; van Knippenberg & Schippers, 2007). The

outcomes of these studies, however, do not provide evidence to suggest a consistent

relationship. For example, some studies find that diverse group composition leads to

improved decision-making processes aided by increased innovation and creativity (Bantel

& Jackson, 1989), while others assert that heterogeneous groups tend to experience

reduced cohesiveness (Harrison, Price, & Bell, 1998), which in turn decreases group

functioning (i.e., group performance) (Chatman & Flynn, 2001). These results might

suggest a more complex relationship between diversity and performance (Williams &

O'Reilly, 1998; van Knippenberg & Schippers, 2007). For example, psychological

mechanisms including empathy, communication, trust, and self-disclosure have been proposed as mediators that diversity relates to in order to impact performance (Roberge & van Dick, 2010). Therefore, the inclusion of mediator variables seems to be important in better explaining diversity's potential impact on performance.

In a meta-analysis of the past forty years of diversity research, Williams and O'Rielly (1998) assert that conflict is an often studied mediator between the diversity and performance relationship. Conflict is defined as disagreement among group members about the way tasks should be performed, including differences in viewpoints, ideas, and opinions that result in negative feelings and emotional tensions among group members (Jehn, 1995; Gerbert, Boerner, and Kearney, 2006). Literature findings suggest, however, that the nature of this mediation is not fully understood as the results of these studies are not consistent. While a great deal of the literature suggests that diversity's effect on performance is negative as conflict increases (e.g., Sessa, 1993; Hinds, Carley, Krachhardt, & Wholey, 2000, O'Reilly Caldwell,& Barnett, 1989), some evidence suggests that the relationship between diversity and performance is strengthened in a positive direction when conflict is present (Jehn, 1995). Conflict has been positively associated with improved decision making and performance on cognitive tasks (Simons, Pelled, & Smith, 1999; Cox & Blake, 1991; Pelled, 1996; Jehn et. al 1999), while it has also been shown to negatively relate to diverse group members' abilities to like each other, members' satisfaction with their group, and their intent to remain in the group (Jehn, 1995). The contradictory nature of conflict's effect as a mediator between

diversity and performance suggests the need to better understand and continue to examine this three-part relationship.

Literature findings also indicate that diversity type may influence the nature of the diversity-conflict-performance relationship (Bell et. al., 2011; Jehn et al., 1999; Jehn, Northcrat, &Neale, 1999). Studies have shown the differential impact of the measures of diversity on conflict and performance (e.g., Bell et. al, 2011). For example, demographic diversity has been positively related to conflict, while value diversity has been negatively related to conflict (Jehn, Northcrat, & Neale, 1999). This suggests the possibility that diversity type influences the way conflict proliferates and thus impacts performance. The examination of different types of diversity may lead to a better understanding of how conflict mediates the relationship between diversity and performance.

Lastly, the inconsistent literature findings regarding diversity's impact on performance may be due to the lack of research attention given to time as a crucial factor which might influence the nature and direction of the relationship. Diversity's effect on performance may change as individuals continue to work together (e.g., Sacco & Schmitt, 2005; Price, Harrison, Gavin, & Florey, 2002). For example, a study of restaurant workers found that as diverse groups worked together, the restaurant became more profitable (Sacco and Schmitt, 2005). Price et al. (2002) also found that university students working together in teams were more likely to perceive diversity attributes including age, sex, and marital status at first, but as time passed they were more likely to perceive diversity attributes of team members including differences in conscientiousness,

task meaningfulness, and outcome importance. Therefore, it is important to examine the mediating role of conflict in the diversity and performance relationship over time.

The purpose of this study is to investigate conflict as a mediator of the relationship between diversity and performance. It also examines different types of diversity to better understand how it is related to conflict, and consequently to performance. Furthermore, the nature of these relationships may materialize differentially as time passes. Therefore, this study will examine the impact of these variables over a two year period.

The following sections briefly explain the model of group effectiveness developed by Cohen and Bailey (1997), provide an overview of the literature on diversity and its relationship to performance, present the research addressing conflict as a mediator within the context of diverse groups, and present the hypotheses that are tested in the study.

A Model of Group Effectiveness

To understand the influence of diversity on performance and a possible mediating variable (i.e., conflict), group processes must first be understood. In their model of group effectiveness (Figure 1), Cohen and Bailey (1997) suggest that task design (e.g., autonomy, dependence), group composition (e.g., size, tenure, demographic diversity), and organizational context (e.g., rewards, supervision) work as inputs of a group to impact internal and external processes (e.g., conflict, cohesiveness). A process variable, for example, communication, is internal if it occurs between individuals within the
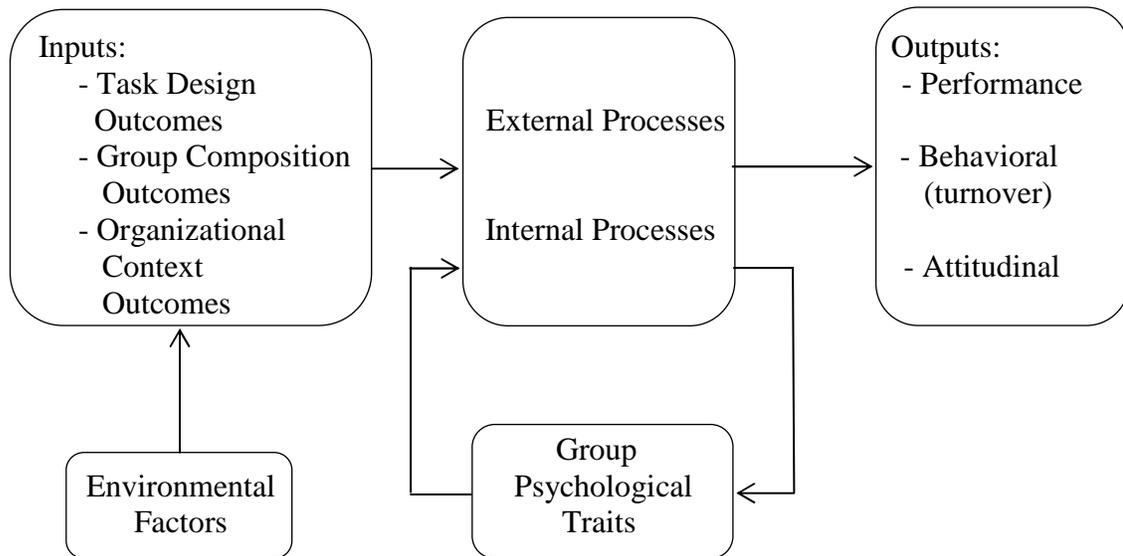
Figure 1. *Group Effectivenss Model (Cohen & Bailey, 1997)*

same group and the process variable is external if it occurs between a group member and

an individual outside of the group.   Group processes then in turn influence performance

outcomes of the group (e.g., productivity), attitudinal outcomes (e.g., job satisfaction) and

behavioral outcomes of group members (e.g., turnover) (Cohen & Bailey, 1997). Task

design, group composition, and organizational context are also posited to be influenced

by environmental factors such as economic turbulence. Group psychological traits (e.g.,

group norms) influence the effect of internal and external processes on performance

outcomes, attitudinal outcomes, and behavioral outcomes.

Diversity

In alignment with Cohen and Bailey's (1997) model, diversity is an aspect of

group composition that works as an input. At the group level, diversity has been defined

as "a mixture of people with different group identities within the same social system" (Nkomo & Cox, 1996, p. 339). Harrison and Sin (2005) define group level diversity as the combined total amount of diversity among group members in a social unit. Therefore, diverse groups comprise individuals who identify themselves with different subgroups. Individuals perceive differences from others through a variety of indicators. Harrison, Price, and Bell (1998) classified these indicators into two dimensions of diversity; surface-level diversity and deep-level diversity. Surface- level diversity refers to outwardly apparent biological traits that are most often indicated by physical appearance. These indicators are usually overtly obvious and perceivable. Age, gender, race, ethnicity, and foreign accent are examples of surface-level diversity attributes. Deep-level diversity attributes are less obvious and more subtle. They are not necessarily perceivable directly or through outward appearance. Deep-level diversity indicators include but are not limited to personality, value system, expertise, and beliefs (Harrison et al., 1998).

The Direct Relationship Between Diversity and Group Performance

Diversity has been related to performance in groups as researchers hypothesize that group heterogeneity has the potential to increase creativity and innovation (Basset-Jones, 2005; Richard 2000). Performance in groups has been defined by Hackman (1987) in terms of three criteria; (1) customers' standards are met or exceeded based on the productive output of the group; (2) the social processes maintained during group work

sustain or enhance group members' abilities to complete tasks; and (3) group members are satisfied with rather than frustrated by group interactions.

In terms of diversity's relationship to group performance, studies have exhibited a weak if not non-existent direct relationship between these variables (e.g., Kochan et al., 2003). For example, in a meta-analysis of 92 scholarly articles, Bell et al. (2011) found no direct relationship between organizational tenure diversity, the variability in time spent in an organization, and performance. Furthermore, Kochan et al. found no direct relationship between diversity and group performance when studying cultural, demographic, technical and cognitive diversity attributes and their relationships with performance appraisal scores and bonus earnings among four large fortune 500 firms. However, only when group processes such as communication and creativity were included as mediators did a relationship between diversity and group performance occur. This finding is consistent with Cohen and Bailey's (1997) model which asserts that group effectiveness is the result of inputs, processes, and outputs. Thus, the effect of group diversity on performance has often been studied indirectly through the inclusion of mediators (e.g., Terborg, Castore, & DeNinno, 1976; Harrison et al., 1998).

Conflict as a Mediator of the Diversity and Group Performance Relationship

Conflict is one group process that has often been studied as a mediator in the diversity and performance relationship (Williams & O'Reilly, 1998; van Knippenberg & Schippers, 2007). Conflict has been defined as disagreements among group members about the way tasks should be performed, including differences in viewpoints, ideas, and

opinions that result in negative feelings and emotional tensions among group members (Jehn, 1995; Gerbert, Boerner, & Kearney, 2006). For example, group members on a team formed to complete a project may disagree about the way they should go about planning the project's phases for completion. The literature suggests that diversity has the potential to influence the degree to which conflict proliferates within groups.

Studies find that conflict may impact social integration in diverse groups. Social integration in diverse teams refers to satisfaction with and attraction towards other group members, group morale, and the degree of coordination among group members (Harrison, Price, Gavin, & Florey, 2000). In a study of 545 employees from a household goods moving company, Jehn and Chatman (2000) found that when individuals perceived conflict within their work group, detrimental effects resulted in terms of group cohesiveness which led to lower group performance and negative attitudes about their group. Heterogeneous or diverse groups have been shown to experience reduced cohesiveness as a result of conflict which in turn leads to reduced performance (e.g., Harrison et al., 1998).

Given that the literature shows diversity may impact the level of conflict that occurs within a group, the following hypothesis is proposed:

Hypothesis 1: Diversity will be positively related to conflict in

groups.

A few studies have found that conflict could have a positive effect on performance; when diverse group members come together, the wide range of perspectives and expertise enhances the quality of debate and improves decision making. This results

8

in better performance (Simons, Pelled, & Smith, 1999; Cox & Blake, 1991; Pelled, 1996). However, the majority of the research examining conflict and performance in diverse groups suggest that increasing levels of conflict negatively impact performance (Chatman& Flynn, 2001). For example, Cronin and Weingart (2007) suggest that when diverse individuals come together to work as a team, they may perceive tasks differently. This leads to discrepancies between what actions team members believe are necessary for the team to be successful. These gaps create conflict thereby limiting the effectiveness of communication between group members which consequently inhibits performance outcomes. Thus:

Hypothesis 2: Conflict will be negatively related to group

performance.

As diversity has been shown to relate to conflict, and conflict has been shown to relate to performance, and in accordance with the group effectiveness model proposed by Cohen and Bailey (1997), many studies have assessed conflict as a mediator between diversity and performance (i.e., Williams & O'Reilly, 1998; Jehn et al., 1999). For example, Pelled (1996) suggested that job-related diversity attributes decrease performance on cognitive tasks when conflict is present. In an experimental study of 76 work groups, Vodosek (2007) found further support for conflict's mediating role in the diversity-performance relationship as group heterogeneity was related to conflict, and conflict led to negative group outcomes. Therefore, based on the above findings, the following hypothesis is tested:

Hypothesis 3: Conflict will mediate the relationship between

diversity and performance. Diversity will be positively related to

conflict, which in turn, will be negatively related to performance.

While conflict appears to be a very robustly supported mediator in the relationship

between diversity and performance, the nature of this mediation has been questioned by

some studies which demonstrate that conflict positively impacts the relationship between

diversity and performance. For example, in a study of 92 work groups from a large

household goods firm, Jehn et al. (1999) found that functional diversity, or differences in

job duties, increased performance on cognitive tasks when conflict was present.

Furthermore, Jehn, Northcrat, and Neale (1999) found that informational diversity (deep-

level), or differences in knowledge, skills, and abilities, demographic diversity (surface-

level), and value diversity (deep-level) led to conflict but a diverse group performed best

only when high levels of informational diversity and low levels of value diversity were

present. This suggests the possibility that diversity type influences the prevalence of

conflict which in turn influences performance. These findings indicate that the

examination of different types of diversity is important. In a meta-analysis of the

literature examining diversity's relationship with performance, Bell et al., (2011)

concluded that different types of diversity were related to performance in different ways.

Functional diversity (deep-level) was positively related to team performance while race

and gender diversity (surface-level) were negatively related to team performance.

Therefore, perhaps different types of diversity disparately influence the diversity-conflict-

performance relationship. Thus:

Research Question 1: Will the nature of the diversity-conflict-

performance relationship be different depending on the type of

surface-level diversity and deep-level diversity?

Diversity and Performance over Time

The inconsistent literature findings regarding the effect of group diversity on performance may also be a function of research that indicates that time is a crucial factor influencing the degree to which diversity relates to performance. The literature indicates that diversity may become more or less salient as time passes. For example, Sacco and Schmitt (2005) found that racial diversity was negatively related to changes in profitability over time. That is, as time passed, racial diversity was associated with more consistently positive performance (Sacco & Schmitt). Furthermore, literature findings show that as diverse group members have time to interact, the relationship between surface-level diversity and performance is weakened while the relationship between deep-level diversity and performance is strengthened (Price, Harrison, Gavin, & Florey, 2002).

Age, race, and gender diversity become less impactful on performance as time passes whereas values and beliefs diversity becomes more important for performance as time passes (Price et al.). Working as a team frequently to complete tasks reduces the impact of visible differences while increasing the impact of less outwardly perceivable differences in alignment with Elsass and Grave's (1997) model of focal individuals' experience in diverse work groups. This model asserts that individuals are categorized based on their diversity attributes, expectations are set based on those diversity attributes,

social exchanges occur through which individuals either reinforce or challenge the expectations, and outcomes related to task performance and group attachment result. Time influences the degree to which diversity impacts outcomes because perceptions or expectations based on attributes can change as time passes (Elsaas & Graves).

Therefore, the inconclusive evidence surrounding the effect of diversity on performance may be the result of the cross-sectional nature of the research designs many research studies utilize (e.g., Williams & O'Reilly, 1998; van Knippenberg & Schippers, 2007). More definitive conclusions might be made through the examination of these variables at different time periods. Furthermore, examining different types of diversity over time may provide a more complete understanding of the ways diversity affects groups because various types of diversity may influence the relationship in different ways. Thus:

> *Research Question 2: Will the surface-level diversity-conflict-performance relationship at time one become weaker at time two?*

> *Research Question 3: Will the deep-level diversity-conflict-performance relationship at time one become stronger at time two?*

The Current Study

The current study examines surface and deep-level diversity, conflict, and performance through a study of Major League Baseball (MLB) teams. Thus, the unit of

analysis for this study is at the group level. Baseball teams operate in a manner reflective of modern organizations in the entertainment industry (Wolfe et al., 2005). MLB team players represent over 20 nationalities and numerous ethnicities. Thus, MLB is very diverse (Schlegel, 2010). Additionally, conflict is rampant as indicated by the many fights, brawls, and harsh words exchanged between players, coaches, umpires, and opposing teams during games (Rainey & Cherilla, 1993). Therefore, this population is ideal through which to address the inconclusive literature surrounding diversity and performance in the workplace. With the addition of conflict, the relationship between different types of diversity and performance may be more fully understood.

MLB players exhibit both surface-level and deep-level diversity indicators; age, race, and country of origin may be perceived as surface level diversity because these markers do not necessarily affect players' informational knowledge about how to do their jobs, that is, how to play baseball. Deep-level diversity indicators may include tenure and star player classification. In terms of tenure, seasoned players may have more knowledge about the way Major League as opposed to Minor League, college, or high school baseball games are executed, the level of professionalism required, and/or the stamina required to travel during the season and play games more frequently (Browne, 2007). Additionally, star player classification indicates differentiating levels of expertise between players on the same team. Thus, MLB players possess both surface-level and deep-level diversity attributes similarly reflected in modern organizations.

In terms of conflict, the many fights, brawls, and harsh words exchanged between players, coaches, umpires, and opposing teams during games indicates its prevalence within the sport (Rainey & Cherilla, 1993). The following excerpt from a media article demonstrates conflict within MLB:

> … the Red Sox were suddenly fighting each other. Well, at least two of them were… first baseman Kevin Youkilis and star slugger Manny Ramirez had to be separated after a heated dugout exchange… Television replays showed Ramirez and Youkilis yelling at each other and Ramirez then being escorted to the tunnel by trainer Paul Lessard. Another camera shot, taken from a background angle, had grainy footage in which Ramirez could be seen taking a swing at Youkilis. (MLB.com, 2008)

In terms of MLB teams, performance is a directly observable and measureable aspect of day-to-day functioning within MLB. Baseball games are dyadic interactions between two teams where behavioral actions result in one team's win and the other's loss. Therefore, performance is easily measured within MLB. Furthermore, performance can be measured through teams' abilities to continually win games. When a team reaches post-season playoffs, this is indicative of their ability to achieve more game wins relative to other teams.

Examining MLB teams may yield interesting results as the variables of interest are highly visible within this participant population. Examining diversity composition, conflict proliferation, and performance levels within these teams may yield intriguing additional insight regarding diverse group functioning as it relates to conflict and performance.

<center>**Method**</center>

Participants

   Archival data were collected for every MLB team for the years 2006 and 2007.

This equated to 30 teams for both 2006 and 2007. The average age across teams in 2006

was 28.37 (SD = 4.74) with a range of 18-47. Teams had players from a total of 27

countries in North America, Asia, Europe, and South America, representing at least five

racial categories; 59.8% of the players were Caucasian, 7.8% were Black, 4.3% were

Latino/Hispanic, 0.2% were Asian, and 27.8% were deemed as "other" due to mixed

racial backgrounds. A total of 71.7% of team players were born in the United States,

while 28.2% were foreign born. The average tenure within MLB in 2006 across the

teams was M = 6.93 (SD = 4.57) and M = 6.52 (SD = 4.38) in 2007.

Measures

   Diversity. Five measures were used to distinguish individual players from each

other to more precisely define the degree of surface-level and deep-level diversity present

within each MLB team. Roberson, Sturman, and Simons (2007) note that determining

the degree of heterogeneity present in groups has prompted some researchers to devise

various equations and formulas to compute diversity indexes, while others have simply

used the standard deviation of diversity variables. Roberson et al. tested the effectiveness

of these various indexes and concluded that standard deviation was the best diversity

index to use in determining the degree of diversity present in a group. Thus, with the

<center>15</center>

following diversity variables, with the exception of star player classification, the degree of diversity present on each MLB team was indicated by the standard deviation.

Surface-level diversity indicators. Three surface-level diversity indicators were used. Players' age was determined from their individual webpages on baseballreference.com (Baseball Reference, 2010). An index of age diversity was determined by examining the standard deviation of the ages of players on each team. Players' races were recorded by searching the internet for pictures of players on all teams. Two raters determined race by viewing the pictures and recording players as Caucasian, African American, Latino/Hispanic, Asian, or "other." Raters' recordings had an inter-rater reliability estimate of $r = .86$. Disagreements in race categorization between raters were resolved by the author by reviewing scores and making a judgment as to which category the player belonged to. An index of race diversity was indicated by the standard deviation of the racial categories present on each team. Players' countries of origin were collected from their individual webpages on baseballreference.com (Baseball Reference, 2010). These countries included Aruba, Australia, Canada, Colombia, Cuba, Curacao, the Dominican Republic, England, Germany, Guam, Indonesia, Jamaica, Japan, Korea, Mexico, the Netherlands Antilles, Nicaragua, the Netherlands, Panama, Puerto Rico, Saudi Arabia, Taiwan, the United States, Venezuela, Vietnam, and the Virgin Islands. Countries were numerically coded. An index of country of origin diversity was determined by the standard deviation of the countries represented on each team.

Deep-level diversity indicators. Two deep-level diversity indicators were used. Players' tenure within MLB, or years in MLB, was determined through players'

individual webpages on baseballreference.com by counting the number of baseball

seasons played (Baseball Reference, 2010). An index of tenure diversity was determined

by the standard deviation of the tenure of players on each team. Star players were

determined by their inclusion in the "All Star" game. Each year in MLB, players are

selected to the "All Star" game based on ratings from fans, coaches, players, and

managers (Chass, 2003). These data were gathered from baseballreference.com

(Baseball Reference, 2010). An index of star player diversity was determined by the

number of star players on each team, where more star players indicated more diversity.

Conflict. Team conflict was measured through a content analysis of a

variety of popular and sport-oriented electronic media, including USA Today,

Sports Illustrated, Sporting News, the New York Times, and ESPN (see Appendix

for complete list). These publications were similar to those used in other studies

examining performance measures of MLB teams (Harder, 1992). The content-

analysis procedure was employed based on a methodology (Huff, 1990; Kabanoff,

1996) frequently used in prior research (e.g., Abrahamson & Hambrick, 1997;

Doucet & Jehn, 1997; Kabanoff, 1997).

General Inquirer (General Inquirer, 2002) was used to determine the words that

defined each conflict event (see Appendix). MonoConc, a content analysis program, was

then utilized to determine the frequency of definition words within the articles.

MonoConc frequency lists were also examined to determine whether or not additional

words should have been added to the established General Inquirer definition list. An

index of conflict for each team was determined by the number of conflict words associated with each team.

Performance. Performance was measured based on team level statistics provided by Baseballreference.com (Baseball Reference, 2010). These statistics included the number of games won during a season, and whether or not the team went to the playoffs at the end of each season. An index of team wins was determined by the number of games won. An index of playoff attainment was determined through coding teams as 0 (no playoff attendance) or 1 (playoff attendance).

Results

Descriptive Statistics

Table 1 presents the descriptive statistics of the variables. With the exception of star player classification, standard deviations of the diversity variables were used to determine the degree of diversity present on each team. Therefore, the descriptive statistics of these variables reflect the means, standard deviations, and ranges of these indexes.

Age diversity ranged from 3.40 to 5.99, with $M = 4.52$ ($SD = .64$) in 2006 and ranged from 3.11 to 3.27 with $M = 4.43$ ($SD = .72$) in 2007. Race diversity ranged from .26 to .94 in 2006 with $M = .55$ ($SD = .16$). In 2007, race diversity was similar with a range of .33 to. 95 and a mean of .58 ($SD = .16$).Country of origin diversity in 2006 ranged from 1.02 to 4.75 with $M = 2.38$ ($SD = .91$) and ranged from 1.19 to 5.50 with $M = 2.36$ ($SD = .90$) in 2007. The surface-level diversity variables seemed to vary similarly

Table 1. *Descriptive Statistics*

Variable	2006			2007		
	M	*SD*	Range	*M*	*SD*	Range
Surface-Level Diversity:						
Age (s.d.)	4.52	.64	3.40-5.99	4.43	.72	3.11-3.27
Race (s.d.)	.55	.16	.26-.94	.58	.16	.33-.95
Country of origin (s.d.)	2.38	.91	1.02-4.75	2.36	.90	1.19-5.50
Deep- Level Diversity:						
Tenure (s.d.)	4.25	.80	2.61-5.95	4.24	.83	2.71-5.95
Number of all stars	.81	.47	0-3	.74	.58	0-3
Mediator:						
Conflict	15.31	22.23	0-92	15.72	15.09	0-70
Performance:						
Playoff attendance (%)	No=.77 Yes=.23			No=.77 Yes=.23		
Team wins	80.94	9.94	61-97	81.08	9.38	66-96

Notes. 2006: N=30; 2007: N=30

from 2006 to 2007. However, there seemed to be a larger degree of age diversity and country of origin diversity than race diversity. Thus, the racial composition of baseball teams seemed to be more homogenous.

Tenure diversity remained somewhat constant from 2006 to 2007 with a range of 2.61 to 5.95 and a mean of 4.25 ($SD = .80$) in 2006 and a range of 2.71 to 5.95 and a mean of 4.24 ($SD = .83$) in 2007. Number of all stars diversity was similar from 2006 to 2007 with a range of 0 to 3 star players on each team for both years. The average number of stars in 2006 was .81 ($SD = .47$) and $M = .74$ ($SD = .58$) in 2007.

Conflict proliferated at a relatively similar rate across the teams in 2006 and 2007 with a range of 0 to 92 and a mean of 15.31 in 2006 and a range of 0 to 70 with a mean of 15.72 in 2007. These results show that the teams, on average, did not seem to have a lot of conflict. However, conflict proliferated more variably in 2006 ($SD = 22.23$) than in 2007 ($SD = 15.09$). Playoff attendance remained constant across years with 23% of teams participating. This was expected as the MLB allows a fixed number of teams to participate each year. The average team wins remained relatively similar across years with a range of 61 to 97 and a mean of 80.94 ($SD = 9.94$) in 2006 and a range of 66 to 96 and a mean of 81.08 ($SD = 9.38$) in 2007.

There seemed to be about the same amount of surface-level diversity and deep-level diversity in the MLB teams. Additionally, both the surface-level and deep-level diversity variables seemed to remain relatively similar from 2006 to 2007.

Correlations

Tables 2 and 3 show the correlations between the diversity indicators, conflict, and the performance variables. As can be seen in Table 2, tenure was moderately related to conflict ($r = .38, p < .05$) and team wins ($r = .38, p < .05$). The more tenure diversity the teams had, the more likely conflict was to occur and the more likely the teams were to win. Number of all stars diversity seemed to be strongly related to team wins ($r = .55, p < .01$), indicating that having star players on teams increased the likelihood that those teams would win more games.

When observing the relationships between the variables in 2007, exhibited in Table 3, it was evident that number of all stars was moderately related to playoff attendance ($r = .38, p < .05$), and strongly related to team wins ($r = .63, p < .01$). The more all stars on a team, the more likely the teams were to attend the playoffs and the more likely they were to win games. Other diversity variables were also related to team wins including age ($r = .51, p < .01$), country of origin ($r = .36, p < .05$) and tenure ($r = .63, p < .01$). As age diversity, country of origin diversity, and tenure diversity increased, the more likely teams were to win games. Thus, diversity seemed to be directly related to performance in ways suggesting that diversity is beneficial to performance. The tenure and number of all stars diversity variables seemed to be consistently related to team wins across both years. Thus, as the variability in tenure within teams increased and the number of all stars on teams increased, the better the performance.

When observing the strength and direction of the correlations from 2006 to 2007, it is evident that the relationships changed from year to year. The relationship between

Table 2. *Correlations Between Diversity Variables, Conflict, and Performance Variables in 2006*

Variable	1	2	3	4	5	6	7
1. Age	-						
2. Race	.13	-					
3. Country of origin	.13	.11	-				
4. Tenure	.75**	-.09	-.03	-			
5. Number of all stars	.20	-.39*	.18	.31	-		
6. Conflict	.19	-.01	.26	.38*	.28	-	
7. Playoff attendance	.12	.05	.03	.33	.20	.42*	-
8. Team wins	.25	-.06	-.02	.38*	.55**	.35	.67**

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3. *Correlations Between Diversity Variables, Conflict, and Performance Variables in 2007*

Variable	1	2	3	4	5	6	7
1. Age	-						
2. Race	.47**	-					
3. Country of origin	.48**	.39*	-				
4. Tenure	.83**	.28	.26	-			
5. Number of all stars	.64**	.31	.41*	.67**	-		
6. Conflict	-.12	.19	.15	-.20	-.12	-	
7. Playoff attendance	.14	.08	.24	.17	.38*	-.06	-
8. Team wins	.51**	.31	.36*	.45*	.63**	-.04	.71**

* $p < .05$, ** $p < .01$, *** $p < .001$

the number of all stars and team wins (2006: $r = .55, p < .01$; 2007: $r = .63, p < .01$) and

the number of all stars and playoff attendance (2006: $r = .20, p > .05$; 2007: $r = .38, p <$

.05) was stronger in 2007 than in 2006. As time passed, the number of star players on a

team made more of a positive impact on performance. The relationship between tenure

and team wins (2006: $r = .38, p < .05$; 2007: $r = .45, p < .05$) was also stronger in 2007

than in 2006, indicating that the variability in tenure on a team was more positively

related to performance as time passed. Furthermore, the relationship between age

diversity and team wins (2006: $r = .25, p < .05$; 2007: $r = .51, p < .01$) was strengthened

from 2006 to 2007 indicating that the variability in age on a team was more positively

related to team wins over time. However, as time passed, the relationship between

conflict and playoff attendance was weakened (2006: $r = .42, p < .05$; 2007: $r = -.06, p$

$> .05$). Thus, conflict was positively related to playoff attendance in 2006, but was

virtually unrelated in 2007.

It is important to note that while many of the relationships between the variables

were not statistically significant at the .05 level because the sample size was relatively

small for both years ($N = 30$), many of the correlations in 2006 approached statistical

significance. Country of origin diversity ($r = .26, p = .10$) and number of all stars

diversity ($r = .28, p = .10$) were somewhat related to conflict, and conflict was somewhat

related to team wins ($r = .35, p = .06$). The more diverse a team was in terms of country

of origin and number of stars, the more likely conflict occurred. However, increased

levels of conflict were related to increased performance. Age diversity tended to be

related to team wins ($r = .25, p = .10$), and tenure diversity tended to be related to playoff

attendance ($r = .33, p = .08$), indicating the tendency of direct relationships between diversity and performance; the more diverse a team was in terms of age and tenure, the more likely they were to perform at higher levels. In 2007, similar results were found as race diversity was related to team wins ($r = .31, p = .09$). Furthermore, all of the relationships appear to be relatively moderately related. Although these correlations were not statistically significant, they had a tendency to show consistent relationships between diversity and conflict, conflict and performance, and diversity and performance.

Test of Hypotheses

Hypothesis 1 stated that diversity would be positively related to conflict in groups. This hypothesis was tested using zero-order correlations. Results show that only tenure diversity was related to conflict in 2006 ($r = .38, p < .05$). This result shows that Hypothesis 1 was mainly not supported as only one of the five diversity indicators was related to conflict. Hypothesis 2 stated that conflict would be negatively related to group performance. This hypothesis was also tested with zero-order correlations. Although conflict was shown to be related to performance, the direction of the relationship was the opposite of what was expected. More specifically, conflict was positively related to playoff attendance in 2006 such that the more conflict teams had, the more likely they were to reach a level of performance that enabled them to attend the playoffs ($r = .42, p < .05$). None of the relationships in 2007 indicated support for Hypothesis 1 or 2.

Hypothesis 3 states that conflict would mediate the relationship between diversity and performance such that diversity would be positively related to conflict, which in turn would be negatively related to performance. To test conflict as a mediator of the
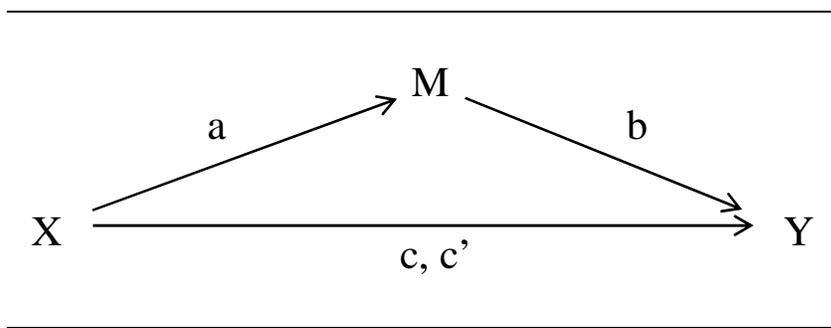
Figure 2. *Baron and Kenny's (1986) Mediation Model*

diversity and performance relationship, Baron and Kenny's (1986) procedure was utilized. Baron and Kenny define a mediator as a variable that accounts for the relationship between an independent variable and a dependent variable (see Figure 2). To test for mediation effects, four statistical criteria must be met through linear regression tests; at step 1 path c must account for the relationship between the independent variable (X) and the dependent variable (Y); at step 2 path a must account for the relationship between the independent variable and the mediator (M); at step 3 path b must account for the relationship between the mediator and the dependent variable when controlling for the effect of the independent variable (indicated by c'); at step 4 path c' must be reduced from path c to indicate partial mediation. Full mediation exists when c' is reduced to zero. Partial mediation demonstrates that the mediator is important, though it may not entirely explain the dependent variable.

Table 4 depicts the result of the mediation tests run to determine conflict's mediating role. At step 1 of the analysis, seven relationships were significant. Age diversity was positively related to team wins in 2007 ($R = .51, F (1, 28) = 9.97, p < .01$), country of origin diversity was positively related to team wins in 2007 ($R = .36, F (1, 28)$

Table 4. *Mediation Analysis*

Variables	Year	Step 1		Step 2		Step 3		Step 4
		R	β	R	β	R	β	β
Surface-Level Diversity:								
Age- Playoff attendance	2006	.12	.12	.19	.19	.41	.41*	**.04**
	2007	.14	.14	-.12	.12	.15	.04	.14
Race- Playoff attendance	2006	.05	.05	-.01	.01	.42	.42*	.05
	2007	.08	.08	.19	.19	.11	.08	.09
Country of origin - Playoff attendance	2006	.16	.16	.26	.86	.44	.41*	**.15**
	2007	.24	.24	.15	.15	.26	.10	.25
Age- Team wins	2006	.25	.25	.19	.19	.40	.32	**.19**
	2007	.51**	.51**	-.12	.64	.51*	.03	.52**
Race- Team wins	2006	-.06	.06	-.01	.01	.36	.35	**.05**
	2007	.31	.31	.19	.19	.33	-.10	.33
Country of origin - Team wins	2006	-.02	-.02	.26	.15	.35	.35	.01
	2007	.36*	.36*	.15	.15	.37	.09	.38*
Deep- Level Diversity:								
Tenure-Playoff attendance	2006	.33	.33	.38*	.38*	.46*	.34	**.20**
	2007	.17	.17	-.20	.20	.17	.03	.17
Number of all stars- Playoff attendance	2006	.20	.20	.28	.28	.42	.39	**.09**
	2007	.38*	.38*	-.12	.12	.38	.01	.38
Tenure-Team wins	2006	.38*	.38*	.38*	.38*	.44	.25	**.28**
	2007	.45*	.45*	-.20	.20	.46*	.06	.47*
Number of all stars- Team wins	2006	.55**	.55**	.28	.29	.59**	.22	**.49****
	2007	.63**	.63**	-.12	.12	.64***	.04	.64**

* p < .05, ** p < .01, *** p < .001
Note. Bold faced numbers reflect a reduction from Step 1 to Step 4

= 4.32, $p < .05$), number of all stars diversity was positively related to playoff attendance in 2007 ($R = .38$, $F (1, 28) = 4.77$, $p < .05$), tenure diversity was positively related to team wins in 2006 and 2007 ($R = .38$, $F (1, 28) = 7.24$, $p < .05$; $R = .45$, $F (1, 28) = 7.24$, $p < .05$), and number of all stars diversity was positively related to team wins in both 2006 and 2007 ($R = .55$, $F (1, 28) = 12.31$, $p < .01$; $R = .63$, $F (1, 28) = 18.76$, $p < .01$). Both surface-level and deep-level diversity indicators were related to performance, thus fulfilling the requirements of step 1 of the mediation analysis proposed by Baron and Kenny.

Step 2 of the mediation analysis required statistically significant relationships between the diversity variables deemed significant at step 1 and conflict. Tenure was positively related to conflict in 2006 ($R = .38$, $F (1, 28) = 4.61$, $p < .05$). This result indicates that when teams had more tenure diversity, more conflict occurred. However, Table 4 shows that age ($R = -.12$, $F (1, 28) = .41$, $p > .05$), country of origin ($R = .15$, $F (1, 28) = .61$, $p > .05$), and number of all stars (2006: $R = .28$, $F (1, 28) = 2.46$, $p > .05$; 2007: $R = -.12$, $F (1, 28) = .39$, $p > .05$) were not related to conflict.

The lack of significant relationships at step 2 prevented further analysis at step 3 and 4. These results indicate that conflict did not mediate the relationship between diversity and performance. The lack of empirical support for the mediating role of conflict might have been due to the small sample size ($N = 30$ for 2006, $N = 30$ for 2007). Nevertheless, it is determined that it is worthwhile to examine the trends in the results regardless of the significance levels exhibited at each step of the mediation analysis.

A number of diversity-performance relationships tended to be mediated by conflict. Most of these results were found in 2006. As Baron and Kenny (1986) suggested, partial mediation exists when the size of the relationship between the diversity variable and conflict is reduced from step1 to step 4 of the analysis. One of the surface-level diversity indicators showed a trend toward mediation in 2006 with the team wins performance variable; the beta-weight for age diversity was reduced from .25 at step 1 to .19 at step 4. One of the surface-level diversity indicators also showed trends toward mediation in 2006 with the playoff performance variable; the beta-weight for age diversity was reduced from .12 at step 1 to .02 at step 4.

Both of the deep-level diversity variables showed trends toward mediation in 2006 with the playoff performance variable; the beta-weight for tenure diversity was reduced from .33 at step 1 to .20 at step 4, and the beta-weight for number of all stars diversity was reduced from .20 at step 1 to .09 at step 4. This was also true for the deep-level diversity variables and the team wins performance variable; the beta-weight for tenure diversity was reduced from .38 at step 1 to .28 at step 4, and the beta-weight for number of all stars diversity was reduced from .55 at step 1 to .49 at step 4. These results indicate that conflict might partially mediate the relationship between diversity pertaining to age, tenure, and the number of all stars and both performance indicators (i.e., , team wins and playoff attendance). However, the beta-weights were reduced to a larger degree for the playoff attendance performance variable than the team wins performance variable. These results appear to suggest that the diversity of age, tenure,

and the number of all stars on teams is positively related to conflict, which in turn, is positively related to performance.

Test of Research Questions

With respect to the research questions posed, due to a lack of results for the mediation analysis, it was not possible to examine these questions statistically. Research Question 1 asked whether or not the nature of the three part diversity-conflict performance relationship would be differently impacted by surface-level diversity and deep-level diversity. Research Question 2 asked whether the surface-level diversity-conflict-performance relationship at time one would become weaker at time two. Research Question 3 asked whether the deep-level diversity-conflict-performance relationship at time one would become stronger at time two. These research questions were explored by investigating the correlations. Specifically, the relationships between the diversity types and conflict and the diversity types and performance were examined to determine if they changed over time. In terms of Research Question 2, one relationship was reduced from 2006 to 2007. The relationship between country of origin and conflict was reduced from $r = .26$ (p $> .05$) in 2006 to $r = .15$ ($p > .05$) in 2007.

With respect to Research Question 3, tenure diversity was related to team wins at $r = .38$ ($p < .05$) in 2006 and $r = .45$ ($p < .05$) in 2007; number of all stars diversity was related to playoff attendance at $r = .20$ ($p > .05$) in 2006 and $r = .38$ ($p < .05$) in 2007 as well as team wins at $r = .55$ ($p < .05$) in 2006 and $r = .63$ ($p < .05$) in 2007. However, the relationship between tenure diversity and playoff attendance was reduced from 2006 ($r = .33, p > .05$) to 2007 ($r = .17, p > .05$). Furthermore, several surface-level diversity

indicators showed positive changes in their relationships with conflict and/or the performance indicators. For example, race diversity was related to conflict at $r = -.01$ ($p > .05$) in 2006 and $r = .19$ ($p > .05$) in 2007, and playoff attendance at $r = .05$ ($p > .05$) in 2006 and $r = .08$ ($p > .05$) in 2007 ; age diversity was related to playoff attendance at $r = .12$ ($p > .05$) in 2006 and $r = .14$ ($p > .05$) in 2007, and team wins at $r = .25$ ($p > .05$) in 2006 and $r = .51$ ($p < .05$) in 2007; country of origin diversity was related to playoff attendance at $r = .03$ ($p > .05$) in 2006 and $r = .24$ ($p > .05$) in 2007 and team wins at $r = -.02$ ($p > .05$) in 2006 and $r = .36$ ($p > .05$) in 2007.

These trends signal that both surface-level diversity and deep-level diversity became more salient for the amount of conflict exhibited and the performance level of teams as time passed. This indicates that, while diversity becomes more important as time passes, diversity type did not seem to impact these relationships.

Discussion

Workplace diversity is becoming increasingly apparent with the globalization of the world economy (Ragins & Gonzalez, 2003). Empirical evidence suggests that diversity in terms of background, experience, and knowledge could maximize competitive advantages in the workplace. This is strategically advantageous because diversity has the potential to increase creativity and innovation thereby positively impacting performance (Basset-Jones, 2005; Richard 2000). Yet, studies that focus on diversity's impact on performance do not provide a clear understanding of the nature of this relationship (e.g., Williams & O'Reilly, 1998; van Knippenberg & Schippers, 2007). As conflict has been suggested as a mediator in the relationship to clarify the inconsistent

literature findings, studies focusing on conflict's mediating role in the diversity and performance relationship do not provide additional evidence to propose a better understanding of diversity's impact on performance (e.g., Hinds, Carley, Krachhardt, & Wholey, 2000; Sessa, 1993; Jehn, 1995; O'Reilly Caldwell, & Barnett, 1989). It has been suggested that investigating diversity type and the effect of time on the diversity-conflict-performance relationship in groups may provide additional evidence to understand the nature and direction of diversity's impact on conflict and performance (Elsas & Graves, 1997).

Hypothesis 1 stated that diversity would be positively related to conflict. With the exception of the positive relationship between tenure diversity and conflict, results showed that diversity was not related to conflict in this study. Although the results did not support the hypothesis, they showed that diversity (country of origin and number of all stars in 2006) tended to be related to conflict, thus indicating that the more diverse a team was in terms of country of origin and number of all stars, the more likely conflict was to occur.

It is important to note that the data collection methodology for the conflict variable utilized media resources to code for the frequency of conflict on teams. This was a conservative estimate as the media representation of conflict on teams only reported conflict that occurred during baseball games. If teams exhibited conflict in a public forum it is presumed that it was prevalent at other times either during practices or in the locker room. Therefore, it is remarkable that this trend was evident in spite of the

conservative estimate of conflict, further indicating the possibility that the relationship between diversity and conflict exists.

The lack of significant relationships between the diversity types and conflict might be due to the possibility that other task-related or interpersonal phenomena were more influential than diversity per se over the degree to which conflict occurred. For example, stress due to the pressure to win games or interpersonal incompatibilities related to drug use may have impacted the prevalence of conflict within baseball teams. Alternatively, the weaknesses in the methodology employed to collect the conflict data (discussed later in the strengths, limitations, and future research section) may have affected the results regarding Hypothesis 1.

Hypothesis 2 stated that conflict would be negatively related to performance. This hypothesis was partially supported as the results indicated that conflict was related to performance albeit in a positive direction. More specifically, it was found that as conflict on teams increased, the better the teams performed. While inconsistent with some literature regarding conflict's effect on performance (e.g., Jehn & Chatman, 2000; Harrison et al., 1998), this result might imply that conflict allows group members to expose their ideas to criticism, bringing different opinions to the forefront that could help group members rethink their positions thereby gathering more information before making decisions (Tjosvold, 1985). This might allow groups to avoid the groupthink phenomenon proposed by Janis (1982) which states that when individuals fail to criticize their group members' ideas in an effort to maintain unanimity, important information may be overlooked which might lead to negative outcomes or performance. However,

because the nature of conflict was not measured directly, this interpretation is speculative. While the majority of the diversity indicators were not related to conflict in the MLB teams, the presence of conflict was related to increased performance.

Hypothesis 3 stated that conflict would mediate the relationship between diversity and performance such that diversity would be positively related to conflict, which in turn would be negatively related to performance. Unfortunately, the mediation analyses did not yield significant results, failing to support the hypothesis. Thus, conflict was not found to mediate the relationship between diversity and performance in the present study. Mediation did not occur mainly because diversity was not related to conflict in this study. As mentioned earlier, conflict might have occurred due to task-related or interpersonal incompatibilities between individuals on teams not related to diversity. A closer look at the content of the conflict reported in the media articles shows that many of the conflicts tended to be spurred by disputes over baseball game rules, disagreements over contracts, and substance abuse problems. Thus, diversity might not have been related to conflict.

While the results of mediation by conflict in the diversity and performance relationship were not statistically significant, conflict did tend to mediate the relationship between one of the surface-level diversity variables (i.e., age) and both performance variables, and the deep-level diversity variables (i.e., tenure and number of all stars) and both performance variables. The relationships between some of the diversity variables and either of the two performance variables tended to be mediated by conflict. However, the results suggest that the size of the reductions were greater between the diversity variables and the playoff attendance performance variable than the reductions in the

relationships between the diversity variables and the team wins performance variable. This suggests that conflict might influence the relationship between diversity and performance only when certain types of performance are considered. Perhaps conflict is only influential when diversity is considered in high stakes situations like playoff games where game wins result in advancement towards a championship title. This pattern in the data indicates the need to focus attention on the type of performance measured. While speculative, performance type may actually work as an input (according to Cohen and Bailey's (1997) group effectiveness model) rather than an output influencing group processes of diverse teams working towards goal achievement. This study originally deemed conflict as an important factor influencing the degree to which the different diversity types would become salient in the diversity and performance relationship (Pelled, Ledford, and Mohrman, 1999). These results indicate that performance type, in this case playoff attendance, may be an additional variable that influences the degree to which diversity types impact group processes.

Given the finding that conflict did not mediate the relationship between diversity and performance, Research Question 1, which proposed the differential impact of diversity type on the mediating relationship, was not examined. However, correlational results allowed for the observation of trends in the data related to Research Question 2 and 3 which posed queries referring to the changing impact of surface-level and deep-level diversity on conflict and performance over time. The results indicated that both surface-level and deep-level diversity become increasingly salient for conflict and performance as time passes. While it was originally expected that only deep-level

diversity would increase in salience as time passed, the relationships between both

diversity types and the conflict and performance variables increased over time. These

trends indicate that diversity, regardless of type, becomes more of an issue as groups

continue to work together. While speculative, perhaps individuals in groups are

concerned with their tasks when their group is first formed and only after periods of time

together and numerous interactions does diversity become salient. This interpretation,

however, may be exclusive to baseball teams where task completion (baseball games)

may be a more urgent and stressful goal. This realization is in alignment with Elsass and

Graves' (1997) model of a focal individual's experience in a diverse work group which

asserts that perceptions or expectations based on peoples' categorization of diverse

individuals change as time passes. This suggests that time may in fact play an important

role in determining the degree to which diversity impacts group processes and outcomes,

and future studies should continue to investigate the temporal implications of diverse

group composition.

While it was not hypothesized in this study, it was noteworthy that positive

relationships between the diversity variables and the performance variables were

obtained. These findings are consistent with previous studies that show that diversity is

positively related to performance (e.g., Basset-Jones, 2005; Richard 2000). However, the

results in this study are inconsistent with literature reviews that suggest that a direct

relationship between diversity and performance is not likely because of the mixed results

of studies examining these two variables. The reviews suggest that diversity works

through mediators or moderators to influence performance (e.g., Williams & O'Reilly,

1998). It is possible that the results of this study are sample specific and thus not generalizable to groups and teams in other settings (e.g., organizations).

Strengths, Limitations, and Future Research

The purpose of this study was to provide a better understanding of diversity's relationship to performance. It contributed to the literature by examining several measures of diversity at the surface and deep levels and by attempting to uncover the potential differential relationships exhibited by the multiple measures of the variable. It was also one of the first studies to address the impact of time on a mediated model of the relationship between diversity and performance, thus further contributing to the literature on this topic. Furthermore, group level research is often overlooked due to the complexity and difficulty of obtaining data at this level. Thus, this study endeavored to examine these phenomena at this often overlooked level of analysis. Finally, unlike the subjective supervisory performance ratings that are often used to measure performance within this stream of research (e.g., Kurtulus, 2011), this study measured performance objectively. This might have reduced the error associated with this measure of performance and its relationship with other variables.

Despite several contributions, this study is not without limitations that might have impacted the generalizability of the results.   While it was mentioned as a strength of the study, the objective measurement of the performance variables may not have addressed other types of performance of baseball players. The subjective ratings of coaches or teammates may have provided a more comprehensive measurement of the performance variable. Furthermore, while deemed sufficient initially, the small sample size utilized in

this study may have been more influential over the results than originally anticipated. Analyzing group level data in this study resulted in the aggregation of the thousands of individual level data points into thirty groups. While seemingly adequate, thirty groups may not have been an appropriate sample size when studying diverse groups especially since very few statistically significant relationships were shown in the results.

Additionally, while control variables were defined for this study, given the small sample size, it did not make sense to include additional variables that would diminish the relationships of interest. These control variables included substance abuse and behavioral health issues within teams. They may have impacted group processes of diverse teams thereby influencing the relationships between diversity and performance, diversity and conflict, and conflict and performance. As substance abuse is a known problem within MLB as many players use steroids and anger issues seem to be rampant (possibly a side effect of steroid use), these variables may have been very influential (Weiner, 2007).

Furthermore, the participants included in this study lacked an important diversity attribute often studied; gender. MLB teams consist of all male players, preventing the analysis of this diversity type which may limit the generalizability of the study's findings to mixed gender groups. It is also quite possible that in MLB teams, diversity causes performance. Given the many significant relationships between some of the diversity variables and performance variables, this may have been the case. However, this study did not utilize an experimental methodology, making it impossible to conclude that causal relationships existed between the variables of interest.

While it was noted that conflict was measured conservatively, the methodology employed failed to directly measure the conflict present on each team. Therefore, the degree of conflict represented was an estimate of the actual amount and could therefore be inaccurate. Furthermore, the methodology did not allow for the measurement of different types of conflict. Studies focusing on different conflict types show that task-related conflict could positively impact performance while interpersonal conflict could be detrimental to group performance (e.g., Lehmann-Willenbrock, Grohmann, & Kauffeld, 2011). It is not known what type of conflict influenced the results of this study. Therefore, the results might contribute less to the understanding of conflict's role in the relationship between diversity and performance. Focusing on the quantitative nature of conflict, as opposed to the qualitative nature of conflict may have led to the non-significant results in the present study.

Due to the weaknesses presented in this study, it is evident that future research focusing on the investigation of diversity at the group level should include a large number of groups. A total of thirty groups was not sufficiently large enough to find statistically significant results in this study. Therefore future researchers must endeavor to examine group level processes when a sufficient sample size can be assured.

Furthermore, the use of MLB players may not reflect the realities of group interactions in organizations which necessitates the study of diversity, conflict, and performance with groups of employees in organizations. While studies suggest that MLB team interactions reflect organizational phenomena accurately, this study's lack of statistically significant results may indicate that the use of MLB teams is not appropriate

for this type of research (e.g., Wolfe et al., 2005). Players may be more individualistic, performance driven, and disinterested in diversity attributes than employees in the workplace. While it is difficult to examine diversity, conflict, and performance at the group level, future studies should examine conflict's mediating effect on the diversity and performance relationship using employee groups as a sample in an organizational setting to ensure the generalizability of the results.

While this study attempted to provide a better understanding of the relationship between diversity and performance, future research must also continue to focus on determining the nature and direction of this relationship, the role of conflict, and the importance of time. Furthermore, researchers should make an effort to include different measures of conflict to understand the nature of this group process better.

Although this study did not hypothesize the importance of performance type and its relationship to the various diversity variables, the results indicated differential results when varying performance outcomes were examined. For example, the beta-weight for the number of all stars diversity variable was reduced to a larger extent when related to the playoff attendance variable than when it was related to the team wins performance variable. This may suggests that performance types themselves are influential over diverse group processes. Future researchers should examine how performance types affect a diverse group's orientation towards goals and the ways in which diversity types become more or less salient depending on the type of performance. A stream of research has become popular recently which examines the effects of goal orientation on performance outcomes (e.g., Bunderson & Sutcliffe, 2003; Dragoni, 2005). Goal

orientation refers to team members' shared perceptions regarding the achievement of specific goals (Bundersond & Sutcliffe, 2003). However, studies have yet to examine whether or not these shared perceptions are altered by diverse group composition. Interesting results may materialize to suggest implications for the design of group work and ideal conditions for work requiring different performance results.

Practical Implications of the Present Study

In terms of the managerial and organizationally-focused implications of this study, the results indicate that diversity is indeed an important consideration in the design of high performing work groups. Many diversity indicators were related positively to performance. Thus, organizations must make an effort to value and promote a diverse workforce. This could be achieved through recruitment, selection, retention, and promotion strategies that target individuals that will increase diversity present in organizations.

Additionally, managers and organizations must remain sensitive to the potential conflict that may arise when diverse groups work together. They should also be aware that the presence of conflict may potentially increase performance. Therefore, interventions to reduce conflict must be done with caution as they may in fact detract from the performance potential of the group. Furthermore, managers and organizations must realize that the time groups spend together may influence and change the processes evident when the group first forms.

Conclusion

Diversity in the workplace is a reality that will continue to be important as the globalizing economy ensures that individuals with different appearances, values, beliefs, heritages, skills, education, and knowledge will no doubt form work groups to achieve common goals. This study endeavored to understand the ways in which diversity is related to performance through conflict at the group level. It sheds light on the continual need to address these relationships and the differing results exhibited by various diversity variables and performance variables. This suggests that the study of these relationships will necessitate complex analyses requiring many researchers to study and replicate findings regarding these variables to conclude a better understanding of diversity's impact on group functioning.

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Appendix

Media Sources used for content analysis:

www.baseball-reference.com   www.nytimes.com
www.sportingnews.com   www.espn.com
www.mlb.com   www.prosportsdaily.com
www.cbssports.com   www.reuters.com/news/sports
www.sportsillustrated.com   www.nbcsports.com
www.foxsports.com   www.sports.yahoo.com
www.usatoday.com   www.latimes.com

Definition List- conflict content analysis:

Abuse	Conflict	Hostility
Agreement	Contract dispute	Peace
Aggression	Cruelty	Punching
Altercation	Differences	Police
Argument	Disagreement	Maltreatment
Arrest	Dispute	Mistreatment
Battle	Dog fighting	Rivalry
Belligerent	Domestic violence	Salary dispute
Brawl	Exploitation	Stabbing
Calm	Felony	Stalking
Clash	Fight	Strife
Collision	Fracas	Struggle
Concord	Fray	Trouble
Combat	Hitting	Violence