THREATENING UNIQUENESS OR ENCOURAGING UNITY: THE ROLE OF GROUP ENTITATIVITY IN DEMOGRAPHICALLY DIVERSE WORK GROUPS

by

Andrew McBride

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Approved by:

_____
Dr. Anita Blanchard

_____
Dr. Lisa Walker

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Dr. Amy Canevello

ABSTRACT

ANDREW MCBRIDE. Threatening uniqueness or encouraging unity: The role of group entitativity in demographically diverse work groups. (Under the direction of DR. ANITA BLANCHARD)

In this study, I apply the concept of entitativity (perceptions of "groupness") to demographically diverse workgroups. I propose that group-level entitativity will interact with group gender and ethnic diversity; the negative relationship between diversity and group outcomes will weaken at high levels of group entitativity. I use multi-level modeling to test these hypotheses using field data from small work groups. The results suggest that group entitativity does interact with gender diversity in the expected direction. Gender diverse groups with higher entitativity had more satisfied members. Results for ethnically diverse groups did not unfold in the expected direction. Further, group member identification was not influenced by diversity, nor did this relationship change with group entitativity ratings. Supplemental, group-level analyses shed some light on the hypothesized relationships. I discuss theoretical implications for applying entitativity to the study of demographically diverse work groups.

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CHAPTER 1: INTRODUCTION

Few topics in the organizational sciences are as encompassing or well-studied as diversity. A search for "workplace diversity" on Google Scholar yields over 1.5 million results. One might incorrectly assume that the case is solved, that diversity and its impact in the workplace is well-understood. In truth, while much has been discovered, many unknowns remain under the broad umbrella of diversity and it continues to be well-studied today (see Roberson, 2019 for a review). One important, and increasingly common, piece of this puzzle is demographic diversity in work groups (Mor Barak & Travis, 2013). Research suggests that employees' work groups are proximal "foci" that affect behaviors and attitudes more directly than distal foci (i.e. an organization; Bentein, Stinglhamber, & Vandenberghe, 2002).

The effects of demographic diversity in work groups are not fully understood. Mixed findings are prevalent; different studies report conflicting accounts of diversity's effect on group outcomes (Jehn, Northcraft, & Neale, 1999; Pelled, Eisenhardt, & Xin, 1999). Despite decades of research, diversity scholars continue to call for a closer examination of potential moderators to the relationship between demographic diversity and group outcomes (Guillaume et al., 2017).

Answering this call, I examine how the concept of entitativity might fit in a model of diversity. Defined as an individual's cognitive assessment of a social unit as a group, entitativity should be relevant in all group contexts (Blanchard, Caudill, & Walker, 2018; Igarashi & Kashima, 2011). However, it is understudied in work groups (see Blanchard et al., 2018 for an exception) and in studies of demographically diverse groups. Merging this stream of research with demographic diversity, I argue that entitativity is one

explanatory mechanism for the mixed findings in previous work. Specifically, entitativity should mitigate the negative effects of demographic diversity. To make this argument, I draw on entitativity research and a popular model of work group diversity: the categorization-elaboration model.

Diversity in Groups

What is diversity? Construct clarity is an essential component of all good research (Suddaby, 2010). A notable issue in the diversity literature is the lack of specification of what exactly is meant by the word "diversity." In this paper, I focus on the demographic characteristics of gender and ethnicity. However, what does it mean to say a group is or is not demographically diverse? While it may appear obvious, Harrison and Klein (2007) note that demographic diversity is conceptualized and operationalized in numerous ways without those ways being made explicit. Following their framework, I focus on diversity as *variety*, which is number of different characteristics in a group (Harrison & Klein, 2007). For example, if a group consists of members who all identify as white, the group has no ethnic diversity. If half of the members identify as white and half as Black, there is a moderate amount of ethnic diversity. Finally, if each member of the group identifies as a different ethnicity (e.g. white, Black, Asian), then the group would be considered to have "maximum" diversity.

The other two types of diversity are separation and disparity. As the name implies, a separation lens views diversity as the degree of difference between subgroups. In this case, maximum group diversity occurs when there are two, equally represented demographic categories within the group (e.g. half white members, half Black members). A disparity lens focuses on power differences. Maximum diversity occurs when one

group member holds a great deal of power and other members do not. While all of these lenses have their uses, diversity as variety is the most appropriate for this study based on my theoretical focus. For simplicity, I use the term diversity throughout to refer to this conceptualization.

A deceptively simple question follows: what are the effects of diversity in the workplace? Much research has attempted to answer this question and reveals varied results (Roberson, 2019; Williams & O'Reilly, 1998). To make sense of this literature, I draw on the categorization-elaboration model of diversity (van Knippenberg, De Dreu, and Homan, 2004).

The Categorization-Elaboration Model

The categorization-elaboration model integrates two competing perspectives on diverse groups: the social categorization perspective (Tajfel & Turner, 1979; Turner, 1985) and the information/decision-making perspective (Ancona & Caldwell, 1992; Bantel & Jackson, 1989). At its core, the categorization-elaboration model offers theoretical explanations for both negative and positive outcomes for diverse groups. The categorization-elaboration model uses social categorization and the development of biases directed at other group members to explain negative effects on group functioning (van Knippenberg et al., 2004). It incorporates information elaboration, in which members in diverse groups are able to freely discuss ideas and come to more creative solutions, to explain positive effects on group functioning (van Knippenberg et al., 2004). I first review the social categorization process, which I focus on in this paper, and make a brief note on the information/decision making perspective.

The social categorization approach (Tajfel & Turner, 1979, for a recent review see Hornsey, 2008) suggests that people categorize themselves into groups of others with whom they feel they share important characteristics. They are more likely to feel positive about the people and group as a whole if they perceive others as similar. In turn, they do not categorize themselves with those they perceive to be dissimilar. Demographic characteristics such as gender and ethnicity are immediately recognized and easily encoded by observers (Jackson et al., 1995; Stangor et al., 1992) and are likely to be the basis for early categorizations (Tsui, Egan, & O'Reilly, 1992).

One consequence of categorization along demographic lines is that subgroups will form and conflict can ensue. The social categorization approach uses the term intergroup bias to describe this phenomenon. When people hold an intergroup bias, they have more positive evaluations of those in the "in-group" and more negative evaluations of the "out-group" (van Knippenberg et al., 2004).

How might the presence of these biases influence group-member outcomes? Empirical work suggests that the results are poor. O'Reilly, Caldwell, and Barnett (1989) show that greater diversity predicts lower group cohesion, which subsequently increases member turnover. In groups with more demographic diversity, members report lower commitment (Tsui et al., 1992) and lower trust and less helping behaviors (Ferguson & Porter, 2013). Additionally, members of these groups also tend to report higher rates of discrimination (Avery, McKay, & Wilson, 2008). When biases are explicitly captured (rather than diversity), they predict negative group-member outcomes such as low satisfaction, commitment, and identification (Williams & O'Reilly, 1998).

Performance outcomes can also be hindered by greater diversity, possibly driven in part by these negative social dynamics. Some empirical work supports a performance dip associated with greater demographic diversity (Chatman, Polzer, Barsade, & Neale, 1998). Meta-analytic results support the existence of a small and negative relationship between race and gender diversity with performance (ρ= - .11 and ρ= - .06, respectively; Bell et al., 2011). These unfortunate results fly in the face of organizational ideals that diversity in the workforce will increase overall organizational effectiveness (Guillaume et al., 2013).

Here, I note that not all studies report a negative relationship between diversity and group or organizational outcomes (c.f. Jehn et al., 1999). Many of these studies adopt the information/decision-making perspective and argue that with a diverse group of members comes a diverse set of skills (Ancona & Caldwell, 1992; Bantel & Jackson, 1989). While this perspective is useful, it is more often applied to questions of functional diversity (e.g. education and tenure; Bantel & Jackson, 1989). In demographically diverse groups where differences are salient, social categorization is more likely to occur (Jackson et al., 1995).

In this study, I assess group member's satisfaction and identification with their workgroup. Together, these constructs capture the extent to which individual members like their workgroups and identify with their goals. Although past research is at times mixed, a preponderance of evidence shows a negative relationship between demographic diversity and social outcomes. Without taking other factors (i.e. moderators) into account, the categorization-elaboration model suggests a negative relationship.

Group Satisfaction. Group satisfaction refers to one's satisfaction with a work group or unit (Dineen et al., 2007). It is more specific than overall job satisfaction and captures only the internal satisfaction one feels with a group.

In line with the categorization – elaboration model, which posits that diversity can lead to social categorization and intergroup biases based on the salience of diversity characteristics, I hypothesize that groups with more diversity on salient, demographic traits of gender and ethnicity will report lower satisfaction than groups with less diversity. Thus:

H1a: As diversity of group gender diversity increases, individual satisfaction will decrease

H1b: As diversity of group ethnic diversity increases, individual satisfaction will decrease

Group Identification. Identification has a long history in the psychological sciences (c.f. Kagan, 1958). More recent work has conceptualized identification as a person's perception of oneness with a group or organization (Ashforth, Harrison, & Corley, 2008). Put simply, it is a measure of the extent to which a person identifies with a target, in this case, with a group.

Group identification is a powerful concept; previous work has related it to demographic traits, demonstrating a mediating relationship between ethnicity, identification, and evaluations (Verkuyten, 2005). In the workplace, research has established identification's importance for outcomes such as extra-role behaviors (Olkkonen & Lipponen, 2006) and performance (van Knippenberg, 2000). Clearly, identification in a work-group context has important outcomes. Here, I focus on group

identification as an important outcome representing a person's choice to categorize themselves as part of their workgroup.

Similar to satisfaction, I expect that group identification ratings will be lower for members of groups that have greater diversity on gender and ethnicity. Specifically:

H2a: As diversity of group gender diversity increases, individual ratings of identification will decrease

H2b: As diversity of group ethnic diversity increases, individual ratings of identification will decrease

It is important to explore factors that may mitigate the effects of categorization along demographic lines. There is a theoretical and empirical basis to expect moderators. The categorization-elaboration model argues that certain factors can mitigate or exacerbate the effects of social categorization. Meta-analyzed correlations between gender and ethnic diversity with social integration outcomes are small and suggest unmeasured moderators (Horwitz & Horwitz, 2007; Webber & Donahue, 2001). Fortunately, the categorization-elaboration model provides potential moderators to this relationship; the propositions laid out in the model have received support since its introduction (Guillaume et al., 2013).

One of the model's propositions, however, has received relatively little attention: that in diverse groups, people of different backgrounds want to feel unique. That is, if a group with diverse members develops a strong and singular group identity (e.g. we are all hairdressers at Salon X), then the diverse members of the group will feel less unique within the group and therefore, less happy with their group. Van Knippenberg et al. (2004) argue that this strong, "superordinate identity," will exacerbate the negative

effects of social categorization. In other words, a superordinate identity will act as a moderator that strengthens the negative relationship between diversity and group outcomes.

There is limited evidence regarding superordinate identities. However, related streams of research offer some reason to believe that a superordinate identity is positive for diverse groups, contrary to van Knippenberg et al.'s (2004) proposition. Entitativity, the perception that a social unit is a group, is commonly linked to beneficial group outcomes (c.f. Blanchard, Caudill, & Walker, 2018; Ip, Chiu, & Wan, 2006). Research on a common ingroup identity broadly suggests and demonstrates the benefits of an overarching group perception (Gaertner et al., 1989; 1990; 1993). However, these research streams have not explicitly focused on demographically diverse groups.

I argue that this proposition from the categorization-elaboration model is a link to entitativity research. While van Knippenberg et al. (2004) use the term, "superordinate identity," it may more accurately reflect a perception of "groupness." In their words:

> when management highlights a shared superordinate identity (e.g., organizational, work group) with an *emphasis on within-group similarity that downplays differences between subgroups*. (van Knippenberg et al., 2004, pg. 1015, emphasis added)

The authors use the example of management highlighting a shared identity to make their point- people desire a sense of uniqueness within groups. However, the statement about within-group similarity and downplaying differences reflects antecedents to entitativity. Entitativity researchers show that perceptions of similarity among members (in characteristics and in goals; Blanchard et al., 2018; Lickel et al., 2000) lead to

entitativity. This research argues that it is not the similarity per se that leads to group outcomes, but that similarity (among other things) creates feelings of entitativity. It is this concept that explains group-member outcomes, and thus I argue here that it acts as the explanatory mechanism that better reflects the proposition put forward by van Knippenberg et al. (2004).

What is Entitativity?

Entitativity is a person's cognitive assessment of a unit as a group (Blanchard, Caudill, & Walker, 2018, Campbell, 1958; Hamilton & Sherman, 1996) and has typically been studied under the domain of social psychology. Nevertheless, it is a relevant concept in all group contexts, and some researchers argue that the perception of entitativity precedes any additional group processes (Blanchard et al., 2018; Igarashi & Kashima, 2011).

Groups may be perceived by individuals as more or less entitative (Lickel et al., 2000); for example, a baseball team would likely be perceived as having high entitativity because members are similar to one another, have shared goals, have been together for some time, interact regularly, and are not open to just anyone. A collection of individuals at the Division of Motor Vehicles (DMV) however, do not have interdependent goals, are not interacting, have no history with one another, and may hold a variety of attitudes and values.

Antecedents to entitativity have been a source of interest to scholars in the field since Campbell (1958) first proposed a set of properties that would foster greater entitativity. Numerous researchers have sought to test these properties. Lickel et al. (2000) for example, identified a positive relationship between interaction, importance of

the group, common outcomes, similarity, and shared goals with ratings of entitativity. Of these, regression analyses revealed interaction to be the strongest predictor. Further research by Blanchard et al. (2018) found significant correlations between interaction, similarity of people, and group history with entitativity.

Critically, researchers have also supported entitativity's relationship with subsequent group outcomes. Previous research has established entitativity's positive relationship with constructs such as group cohesion (Ip et al., 2006) and group identification (Castano, Yzerbyt, & Bourguignon, 2003). The study of entitativity, thus far, supports its importance for positive group outcomes, suggesting that members integrate more positively when they perceive a coherent group.

Most entitativity research has been conducted at the individual level of analysis. Researchers gather people's perceptions of the entitativity of their group and relate this to other constructs of interest. Theoretically, however, entitativity is shared by group members. Group members are nested within the group. They see the same interactions and share the same context. Thus, if one person believes the group to be highly entitative, it is likely that other members will agree. Indeed, researchers using the term entitativity sometimes use outside perceiver (i.e. observer) ratings of a social unit's entitativity (Hamilton, Sherman, & Castelli, 2002). This implies that the *group* has a certain level of entitativity. In addition, researchers studying entitativity are fundamentally interested in groups and how people in groups perceive them. Entitativity at the group-level captures member's shared perceptions, which is critical in this paper to test the propositions laid out by van Knippenberg et al. (2004).

Entitativity and the Categorization-Elaboration Model

How might entitativity fit in the categorization-elaboration model of diverse groups? One might argue that too much entitativity threatens the uniqueness of individuals and subgroups, which, as van Knippenberg et al. (2004) suggest, leads to negative outcomes. However, empirical work supports the benefits of high entitativity perceptions and work on entitativity has generally conceptualized it as a positive, and even necessary, component for group success (Blanchard et al., 2018; Igarashi & Kashima, 2011).

Previous work at the intersection of entitativity and diversity has focused on how members of highly entitative groups may be more likely to favor the ingroup. For example, Gaertner and Schopler (1998) use an experimental design to reveal that groups manipulated to experience greater entitativity hold higher ratings of ingroup favoritism. Further, they did not find evidence for greater dislike of the outgroup. Castano and his colleagues (2002) similarly find that group salience and entitativity increase biases favoring the ingroup, however unlike Gaertner and Schopler (1998), they find a link to more negative outgroup evaluations. Additionally, meta-analysis on observer perceptions of outgroups reveals that groups seen as more entitative face stronger stereotypes (Agadullina & Lovakov, 2018). From this research, one might conclude that stronger perceptions of group entitativity can be detrimental, leading to stereotyping and the development of biases.

However, it is important to note that while highly entitative groups may be the subject of stronger stereotypes, this likely applies to social categories such as ethnicity rather than interacting groups such as work-teams. We lack a clear understanding of how entitativity operates within a small, interacting group of demographically diverse

individuals. Further, entitativity research has mostly neglected the workplace with some exceptions (c.f. Blanchard et al., 2018). In this context, entitativity strengthening the ingroup may be beneficial. In this view, entitativity may create a coherent ingroup that overrides social categories that are superordinate to the group. That is, the proximal entitativity of the group may create a group perception more important than gender or ethnicity.

Research on common identities provides insight into how entitativity might operate in diverse groups. In two experimental studies, Gaertner and his colleagues (1989; 1990) demonstrate the benefits of a one-group conceptualization. Specifically, they show that in conditions manipulated to support a two-group conceptualization (i.e. two subgroups) or a separate individual's conceptualization, intergroup biases were stronger than in a one-group condition. Gaertner and colleagues (1993;1996) would go on to develop the common ingroup identity model, which supports the positive impact of a shared group identity among group members who may otherwise fracture into subgroups.

Nier et al. (2001) find more support for the idea that a common group identity will reduce bias along demographic lines. They show that white undergraduate students give more positive evaluations and are more likely to agree to an interview with a Black undergraduate confederate if the Black confederate wears sports paraphilia matching the participants' preferred team. The authors propose that a shared identity of a sports team was enough to overcome any racial biases that participants may have held.

Homan and colleagues (2008) offer additional insight into answering the question of how entitativity may fit into the categorization-elaboration model. The authors propose that the creation of a superordinate identity will be beneficial for performance in diverse

groups because it will obscure differences, decrease comparative fit and subsequently attenuate intergroup biases that may otherwise develop from the categorization process. They found support for this notion, concluding that, "installing a superordinate identity can help overcome some of the negative consequences of diversity" (Homan et al., 2008, pg. 1218). Homan et al. (2008) operationalize the creation of a superordinate identity by manipulating the reward system in an experiment: in the superordinate identity condition, members were informed that they would receive a team award of $40, compared to other conditions in which individual or subgroup awards were given.

The authors make an important contribution, showing that structural changes in the form of reward systems can improve team performance by emphasizing a superordinate identity. They do not, however, focus on member *perceptions* of a shared group, which is fundamental to the model proposed by Gaertner and colleagues (1993) and to existing research on entitativity. In this view, it is members' cognitive assessment of one, coherent group that offsets the categorization process along demographic lines and allows for recategorization as a group. It is especially important to study entitativity perceptions as these precede perceptions of shared identity (Castano et al., 2003).

In sum, theoretical and empirical work suggests that shared perceptions of entitativity are likely to positively impact social integration outcomes for group members, counter to van Knippenberg and colleagues' (2004) proposal that too much of a shared identity will be negative for subgroup members.

Entitativity as a moderator. Entitativity reflects the perception that "I belong to one, coherent group." At the group-level, it captures member's shared perceptions of this coherence. While individual perceptions of entitativity are important and have been

linked to individual member outcomes (Lickel et al., 2000; Ip et al., 2006), examining the impact of a shared group perception is a next step for entitativity research.

Therefore, I propose that group level entitativity will act as a moderator to the previously hypothesized relationships. Thus:

H3a: Group entitativity will moderate the relationship between group gender diversity and satisfaction such that the negative relationship will become weaker as entitativity increases.

H3b: Group entitativity will moderate the relationship between group ethnic diversity and satisfaction such that the negative relationship will become weaker as entitativity increases.

H4a: Group entitativity will moderate the relationship between group gender diversity and identification such that the negative relationship will become weaker as entitativity increases.

H4b: Group entitativity will moderate the relationship between group ethnic diversity and identification such that the negative relationship will become weaker as entitativity increases.

CHAPTER 2: METHOD

Participants

Undergraduate students in multiple psychology courses were asked to think of a workgroup that they were familiar with as part of an extra credit opportunity. They then distributed a link to a survey via email to the members of the workgroup. In addition to filling out the survey, each respondent filled out the name of their workgroup and the name of the student who initially distributed the survey. This allowed us to match workgroup members and provide students with the appropriate extra credit points.

Students were given examples of what constitutes a workgroup and what does not. For example, a book club would fit the category of a social group while a group of restaurant waiters would fit the requirement for a workgroup. All groups were manually checked by the principal investigators to ensure they adequately fit the definition of a workgroup. Groups ranged in size from 3 to 22 ($M = 6.90$, $SD = 5.21$). Any group with less than 3 members was excluded. Of the 71 groups, the majority (58) were professional, off-campus groups such as “Team members at Bojangles,” “Managers at Arby’s,” and “YMCA staff.” Nine of the groups were best classified as on-campus student groups; examples include, “RA’s at [student hall]” and “Student employees in undergraduate admissions.” Four of the groups were from non-profit organizations, for example, “Employees of meals on wheels.”

The final sample consists of 347 people nested within 71 groups. The average age of the participants was around 30 years ($M = 30.70$, $SD = 12.94$). Of these, 230 (67%) people identified as female, 107 (31%) identified as male, 10 (3%) identified as an unlisted gender or chose not to respond. For ethnicity, 205 (60%) identified as white or

Caucasian, 62 (18%) identified as Black or African American, 38 (10%) identified as Latino or Hispanic, 20 (6%) identified as Asian-American, 17 (5%) identified as an unlisted ethnicity or chose not to respond, 3 (< 1%) identified as Native Hawaiian or other Pacific Islander, and 2 (< 1%) identified as American Indian or Alaskan Native. Qualitive responses were re-categorized if possible. For example, responses of "Asian" were coded into the Asian American ethnic group.

Measures

Within-unit Diversity. A key issue is how to measure demographic diversity within each group, in line with my focus on diversity as variety (Harrison & Klein, 2007). The most widely accepted measure of demographic diversity is Blau's index (1977). It is also a clear example of a measure that captures variety of a characteristic (Harrison & Klein, 2007; Miller & Triana, 2009). Harrison and Sin (2006) propose four criteria that a good measure of diversity should meet: it should return a value of zero when there is homogeneity on a characteristic, it should return increasingly large numbers as diversity of a characteristic increases, it should not assume negative values, and it should be unbounded. Blau's index fulfills all four criteria (Miller & Triana, 2009).

Blau's index can be represented by the formula: $1 - \sum \rho\kappa^2$, where $\rho\kappa$ is the proportion of group members in each of the κ categories. The index assesses the amount of variation of a characteristic (e.g. gender, ethnicity) that is present in a group. For example, if all members of a group identify as women, the formula returns a value of zero, indicating homogeneity in gender. If exactly half of the members in a group identify as men and half identify as women, Blau's index would return a value of .50, representing an even split.

For ethnicity, the range of the formula depends on the number of ethnic groups represented in the data (i.e. the number of κ categories). For example, if there are four ethnic groups, Blau's index ranges from 0 when all members share an ethnicity to .75 when there is only one member from all four ethnicities in the group.

Group satisfaction. The first outcome variable, group satisfaction, is measured with a 3-item scale used by Dineen et al. (2007). The scale was originally adapted from Cammann et al.'s (1983) global job satisfaction scale. The items include: "In general, I like being in this group," "All in all, I am satisfied with this group," and the reverse-coded "In general, I don't like this group." Satisfaction was measured on a 7-point Likert scale (1 = *Strongly Disagree*; 7 = *Strongly Agree*). The scale demonstrates good reliability (α = .85; Dineen et al., 2007).

Group identification. The second outcome variable, group identification, is adapted from Mael and Ashforth's (1992) 6-item scale. While the original scale was used in the context of alumni identifying with their alma mater, subsequent research has adapted the scale to be used in a variety of work-group contexts (Kim & Glomb, 2014; Venkataramani & Tangirala, 2010). The items are: "When someone criticizes this group, it feels like a personal insult," "When someone praises this group, it feels like a personal compliment," "I am very interested in what others think about this group," "this group's successes are my successes," and "When I talk about this group, I usually say 'we' rather than 'they'." The numbering of the scale was switched to remain consistent with our other measures (1 = *Strongly Disagree*; 7 = *Strongly Agree*). Research using this 5-item version of the scale reports high internal consistency (α = .90; Kim & Glomb, 2014).

Entitativity. Entitativity, the proposed moderating variable, is measured using a scale developed and validated by Blanchard et al. (2018). The measure consists of three items: "We are a group," "We are a unit," and "We feel like a group to me." The measure uses a seven-point Likert-type scale (1 = *Strongly Disagree*; 7 = *Strongly Agree*).

Analysis Strategy

Aggregation. Two variables in the model are operationalized at the group level: diversity and entitativity. The calculation of demographic diversity using Blau's index sets it at the group level; each group will receive a value for both gender and ethnicity that captures the variety of demographic traits present in the group.

Entitativity is measured using self-report from each member; thus, it must be aggregated to the group-level if we are to capture a group-level construct. The entitativity items used here follow a referent-shift model, where participants answer questions about the group (i.e. "We are a group"; Chan, 1998). Since I expect groups to differ in their degree of perceived entitativity, it should be operationalized at the group-level.

Statistically, the agreement index, $r_{wg(j)}$, is useful to determine the amount of agreement between group members on measures with multiple items (Bliese, 2000). This index captures inter-rater agreement where the raters are the group members and their responses to each measure (e.g. entitativity) are the targets (Lebreton & Senter, 2008). The mean $r_{wg(j)}$ value for entitativity is .81, which exceeds the .70 cutoff recommended by Bliese (2000).

Cross-level hypotheses. The outcome variables, identification and satisfaction, are at the individual level. To test the hypothesis that demographic diversity will negatively predict these individual-level variables, cross-level analysis will be used. In

total, four cross-level models will be tested: gender diversity on satisfaction and identification, and ethnic diversity on satisfaction and identification.

Recommendations for cross-level hypotheses offered by Aguinis, Gottfredson, and Culpepper (2013) will be followed. The first step is to calculate the intraclass correlation (ICC) for each individual level dependent variable. This value signifies the proportion of total variance in Y (e.g. group satisfaction) that is accounted for by group membership. The value ranges from 0 to 1, with higher values indicating a greater portion of variance due to group membership. To justify examining group-level influences as opposed to simpler, individual-level relationships, Aguinis et al. (2013) note that values commonly range from .10 to .25 in psychology.

Next, the direct effects of demographic diversity on the outcome variables and entitativity on the outcome variables will be tested. To do this, Aguinis et al. (2013) recommend a Random Intercept and Fixed Slopes Model. Using this model, the cross-level direct effect of demographic diversity and group entitativity on outcome variables is assessed. Grand mean scores will be calculated for group entitativity ratings for interpretation. Thus, this model will assess the amount of change in satisfaction and identification that is expected based on a 1-unit increase in entitativity ratings or a 1-unit increase in gender or ethnic diversity. The direct effect of entitativity is not relevant for this paper's predictions. The direct effects of gender and ethnic diversity on satisfaction and identification will provide evidence for or against hypotheses 1 and 2.

The next step assesses whether a cross-level moderator exists. Does the slope of the outcome variables on demographic diversity vary across groups? I hypothesize that it does based on entitativity ratings. When entitativity ratings are included as a level 2

predictor, the cross-level interaction term indicates the change in slope of the dependent variable on demographic diversity based on a 1-unit increase in entitativity. If this change in slope is significant and in the hypothesized direction (i.e. the slope becomes weaker as entitativity increases), hypotheses 3 and 4 are supported.

CHAPTER 3: RESULTS

Descriptive Statistics

Before calculating Blau's index for gender and ethnicity, I checked my data for any instances where recoding was necessary. I did not include the 10 people who left gender blank or indicated option 3. Instead, I chose to calculate Blau's index for gender using only two categories.

For ethnicity, I mostly avoided recoding, not wanting to treat certain people as part of an ethnic group they did not indicate belonging to. Thus, I did not recode the 2 people who identified as American Indian or Alaskan or the 3 people who identified as Native Hawaiian or Pacific Islander. Of the 14 people who chose 7 for "other," 9 of them wrote in responses. Only one, "Asian" was easily recoded into a category ("Asian American").

Means, standard deviations, and correlations of main study variables are presented in Table 1. Gender diversity ranges from 0, indicating no diversity, to 0.50, indicating a group with equal amounts of men and women. Ethnic diversity ranges from 0, indicating no diversity, to 0.75, indicating a group with an equal amount of people who identify in each of four categories: white, Black, Hispanic/Latino, and Asian American. Group entitativity, individual-level satisfaction and individual-level identification are measured on 7-point scales.

Aggregation of Group-level Data

Before testing my cross-level hypotheses, I checked to ensure there was enough group-level variation in satisfaction and identification to warrant a multilevel examination. To do this, I calculated ICC(1) values, which assess the reliability of

individual member ratings; higher ratings indicate increasing agreement between group members (Scherbaum & Ferreter, 2009). The ICC(1) values for satisfaction and identification indicated that 22% and 27% of score variability are attributable to group membership, respectively (Bliese, 2013, see Table 2). These scores are similar to the average ICC(1) values found for group-level constructs in organizational research (.22; Woehr et al., 2015). Thus, I continued with my analysis as planned.

Cross-level Hypotheses

I used multilevel modeling with the "multilevel" package and "nlme" function in R to test whether demographic diversity and group entitativity predict individual satisfaction and identification. Both intercepts and slopes were allowed to vary across groups. The cross-level interaction between demographic diversity and group entitativity was included in order to investigate whether the relationship between demographic diversity and satisfaction and identification depended on the group entitativity rating.

To test my cross-level hypotheses, I could have included both gender and ethnic diversity as predictors or run separate models for each predictor. Theoretically, there is no reason to believe that groups with greater ethnic diversity would have greater gender diversity or vice versa. Empirically, the correlation between Blau's index for gender and for ethnicity in this sample is small and non-significant (r = .15, p = .20). Thus, I found support for running separate models. For each outcome variable, I tested the effects of gender and ethic diversity and then included the interaction term with group entitativity.

Gender Diversity

First, I calculated the effects of gender diversity on individual satisfaction and identification to test hypotheses 1a and 2a. Next, I calculated the interaction between

gender diversity and group entitativity to test hypotheses 3a and 4a. I report my results here (see Table 3).

I ran a multilevel regression with group gender diversity predicting individual satisfaction. The direct effect, without group entitativity in the model, was not statistically significant (b = -0.65, p = .11). Thus, I found no support for hypothesis 1a.

I ran the same model with group gender diversity predicting individual identification. The results were also not significant (b = -0.44, p = .33); I found no support for hypothesis 2a.

Before entering the interaction into the model, I grand mean centered group entitativity and gender diversity. When group entitativity and the interaction term between gender diversity and group entitativity are entered into the model, the effect of gender diversity on satisfaction reaches significance (b = -0.78, p = .004). The interaction term was marginally significant (b = 0.70, p = .08). A simple slopes analysis (see Figure 2 for plot) shows that at low levels of group entitativity (-1 *SD*), gender diversity has a significant and negative relationship with satisfaction (b = -1.25, p < .001). However, at high levels of group entitativity (+1 *SD*), the relationship between gender diversity and satisfaction becomes non-significant (b = -0.31, p = .43). Thus, while the interaction term did not reach significance, I found some support for hypothesis 3a.

I followed the same strategy above to test the interaction between gender diversity and group entitativity on identification. However, the interaction term was not significant (b = 0.36, p = .49). Thus, I found no support for hypothesis 4a.

Ethnic Diversity

Next, I calculated the effects of ethnic diversity on individual satisfaction and identification to test hypotheses 1b and 2b. Finally, I calculated the interaction between ethnic diversity and group entitativity to test hypotheses 3b and 4b. I report my results here (see Table 4).

I ran a multilevel regression with group ethnic diversity predicting individual satisfaction. The direct relationship was not significant (b = .03, p = .93), providing no support for hypothesis 1b.

I ran the same model predicting individual identification. The results were not significant (b = -0.15, p = .69), providing no support for hypothesis 2b.

Before entering the interaction into the model, I grand mean centered group entitativity and ethnic diversity. The interaction term was not significant (b = 0.34, p = .31). Thus, I found no support for hypothesis 3b.

The final hypothesis predicting an interaction effect of group entitativity with ethnic diversity on identification was not supported (b = -0.08, p = .86). Thus, I found no support for hypothesis 4b.

Supplemental Group-level Analyses

My hypothesized model is cross-level: I predicted that group diversity will affect individual outcomes and this will be moderated by group entitativity. In a supplemental analysis, I shift this model to the group-level. Here, work group identification and work group satisfaction are treated as group-level variables. From a theoretical perspective, one could argue that group members are in a shared context and are thus likely to share these perceptions. I make this argument for entitativity and extend it to identification and satisfaction here. Some recent work adopts this perspective, treating work group

identification (Glambek, Einarsen, & Notelars, 2020; Kim & Glomb, 2014) and work group satisfaction (Dineen et al., 2007; Kong, Konczak, & Bottom, 2015) as group-level variables.

To demonstrate this empirically, I calculated rwg(j) values for satisfaction and identification. The mean rwg(j) for satisfaction (.84) and identification (.78) meet the .70 recommended cutoff from Bliese (2000). Thus, I continued with the supplemental analyses, testing the same hypotheses all at the group-level using moderated regression.

Descriptive Statistics

Means, standard deviations, and correlations between all group-level variables are presented in Table 5. Gender diversity and ethnic diversity followed the same measurement as in the cross-level design. All other variables were aggregated to the group level and follow a 7-point scale ranging from *Strongly Disagree* to *Strongly Agree*.

Gender Diversity

First, I tested the effects of gender diversity on group-level satisfaction and identification. The results are presented in Table 6.

The direct effect of gender diversity on group satisfaction was not significant (b = -0.58, p = .15). The same was true for the direct effect of gender diversity on group identification (b = -0.41, p = .37). Step 2 shows that, when entitativity was entered into the equation, the direct effect of gender diversity on group satisfaction was significant (b = -0.60, p = .02). The interaction effect was also significant (b = 0.88, p = .02).

A simple slopes analysis (see Figure 3 for plot) shows that at low levels of group entitativity (-1 *SD*), the relationship between gender diversity and group satisfaction is

significant and negative (b = -1.20, p < .001). At high levels of group entitativity (+1 *SD*), the relationship is not significant (b = 0.00, p = .99).

Using the same strategy above to predict identification, the interaction term between gender diversity and group entitativity was not significant (b = 0.61, p = .25).

Ethnic Diversity

Next, I tested the effects of ethnic diversity on group-level satisfaction and identification. The results are presented in Table 7. Neither the direct effect of ethnic diversity on group satisfaction (b = 0.08, p = .81) nor on group identification (b = -0.11, p = .77) were significant.

The interaction between ethnic diversity and group entitativity on group satisfaction was not significant (b = 0.39, p = .23). The same held true for the interaction between ethnic diversity and group entitativity on group identification (b = 0.11, p = .81).

Alternative Ethnicity Coding

Given that the majority of respondents are white, I tested an alternative coding strategy for ethnicity that creates two dichotomous categories: white and non-white. All respondents who identified as white and all respondents who identified as Asian American were coded as 0. One respondent who wrote in "Asian" was also coded into this category. There were 226 (66%) in this category. All respondents who identified as Black, Hispanic or Latino, American Indian/Alaskan Native, Native Hawaiian or other Pacific Islander, or indicated "other" were coded into the non-white category. This category consisted of 118 (34%) people. Only 3 respondents left ethnicity blank.

Using this alternative coding strategy, diversity ranged from 0, indicating no diversity, to .50, indicating a group with half white people and half non-white people.

The results at the cross-level and group-level are presented in Tables 8 and 9, respectively. Using this strategy did not result in any changes; direct effects and interaction effects for ethnicity remained non-significant.

CHAPTER 4: DISCUSSION

The aim of this study was to test the hypothesis that group-level entitativity would moderate a negative relationship between group diversity and individual member outcomes. Contrary to the propositions laid out in van Knippenberg et al.'s (2004) categorization-elaboration model, I predicted that members of diverse groups would report better outcomes when they share a perception that they are a part of one group. Van Knippenberg et al. (2004) propose that subgroups in diverse groups should be beneficial because they allow members to maintain a sense of personal uniqueness. I argue that a shared, "one-group" perception will be more beneficial for members because this group perception will overcome any demographic differences that exist within the group.

I found some support for this moderation in one of my hypothesized models: the cross-level interaction between gender diversity and group entitativity on individual satisfaction (hypothesis 3a). While the interaction term was only marginally significant ($p = .08$), a simple slopes analysis showed that the significant and negative relationship between gender diversity and satisfaction ratings disappeared at high levels of group entitativity. These results should be interpreted with caution, though they are in line with my hypothesis that shared perceptions of "groupness" can overcome some of the conflict that arises among group members who differ in gender identity.

I did not find support for my other cross-level hypotheses. That is, group entitativity did not moderate the relationship between gender diversity and identification, ethnic diversity and satisfaction, or ethnic diversity and identification.

None of my hypotheses with identification as an outcome were supported. It is possible that identification represents a "higher bar," that it is more difficult to change as compared to satisfaction. Still, a group social identity is expected to be influenced by demographic characteristics such as gender and ethnicity (Tajfel & Turner, 1979). It is therefore surprising that I do not see an effect here, especially in light of the fact that there is an effect of gender on satisfaction.

Because there were theoretical and empirical reasons to suggest identification and satisfaction should be considered group-level constructs (Dineen et al., 2007; Kim & Glomb, 2014), I conducted supplementary analyses at the group level. In these analyses, I found further support for an interaction between gender diversity and group entitativity on satisfaction. Again, the negative relationship between gender diversity and group satisfaction ratings disappeared at high levels of group entitativity. In a group where members share strong and positive perceptions of "groupness," they also share feelings of satisfaction, even when gender differences might otherwise cause conflict.

As in the cross-level results, there was no direct effect of gender or ethnic diversity on satisfaction or identification. In addition, only the interaction described above was significant, group entitativity failed to moderate any other relationship.

Accounting for both the cross and group-level results provides some clear takeaways. No direct effect of diversity on outcome variables emerged. Specifically, neither gender diversity nor ethnic diversity could significantly predict satisfaction or identification, regardless of level of analysis. These findings, while at odds with theorizing from social categorization and the categorization-elaboration model, do fit with some empirical work on group diversity (Horwitz & Horwitz, 2007). Still, it is

worth considering whether the specific sample I use here could have influenced these results. While some of the groups were comprised of young, college-aged students who might be more liberal in their social beliefs, the majority (82%) were off-campus, professional groups. Thus, it seems reasonable to assume that these groups are relatively typical of workplaces, at least in the Southeastern United States from which these groups originated.

A second takeaway is that group entitativity interacts with group gender diversity to predict satisfaction. This result emerged with both individual and group-level satisfaction and the pattern is clear: at low levels of group entitativity, gender diversity negatively impacts satisfaction; at high levels of group entitativity, the relationship is non-significant.

Thirdly, this interaction does not emerge with identification at either individual or group-level, suggesting that the role of group entitativity in diverse groups might not be universal. That is, it might influence some group outcomes and not others.

Lastly, group entitativity did not consistently moderate the relationship between ethnic diversity and satisfaction or identification. The lack of significant findings in these models may partly be due to limitations which I discuss further below.

Theoretical Implications

In line with my prediction, high group entitativity fostered group member satisfaction even when there was high gender diversity. This adds nuance to the categorization-elaboration model's proposition on a superordinate identity (van Knippenberg et al., 2004). Specifically, it suggests that members of gender diverse groups are more satisfied when they clearly perceive *one*, coherent group. While group

members likely desire some sense of uniqueness (Brewer, 1991), coherence might be a more important predictor of satisfaction.

What does it mean to be a highly entitative group? High, shared entitativity might indicate a group that is less a collection of individuals and more a distinct entity. When Campbell (1958) initially conceptualized entitativity, he discussed it in this way; he argued that groups could be entities in the same way that individuals are entities. While group members with low or moderate levels of shared entitativity might still "see" each other as individuals, group members with high, shared entitativity might see the group instead. I do not suggest that individuality is entirely absent from groups with high entitativity. Instead, I propose that members of these highly entitative groups focus more on the features of the group as a whole than the individuals within it. This would explain why highly entitative groups do not show the same negative relationship between gender diversity and satisfaction as other groups do.

Finally, and on a methodological note, both satisfaction and identification responses reached relatively high levels of agreement between group members in this sample. The $r_{wg(j)}$ values of .84 and .77, respectively, exceed the rule-of-thumb cutoff value of .70 (Bliese, 2000). While I initially conceptualized these constructs as individual-level, this provides some empirical support for the notion that they can (and perhaps should) be conceptualized and operationalized at the group level.

Practical Implications

From an applied perspective, I offer some initial points and suggestions. For one, group demographic diversity does not necessarily result in poor group outcomes. In this study, neither gender nor ethnic diversity shared a direct relationship with group

outcomes. Clearly, diversity matters (Guillaume et al., 2017). However, it does not influence outcomes in a simple, one-to-one fashion. Additional characteristics such as age, tenure, and educational background, among others, could have their own unique effect on certain outcomes. On this point, we should be cautious not to generalize these null results too widely. The majority of these groups were professional, off-campus groups with an age makeup around 30 years (M = 30.70, SD = 12.94). It is possible that having groups with more older members or groups from more non-profits could change the pattern of results.

In gender diverse groups, member satisfaction can be improved if entitativity is strong and shared. Fortunately, previous research shows some clear and controllable antecedents to entitativity. When members have a history with one another, share similar goals, and interact more, they perceive a more entitative group (Blanchard et al., 2018; Lickel et al., 2000). Thus, when groups have a mix of men and women, it is especially important to give them time to form a history, emphasize their shared, work-relevant goals, and encourage interaction between them.

Limitations

One of the limitations of this study is the amount of ethnic diversity in my sample. Though not surprising, my sample did not consist of an even amount of people identifying as white, Black, Latino or Hispanic, and Asian American. Instead, the majority of participants identified as white, followed by Black, Latino or Hispanic, and Asian American. This lack of ideal ethnic diversity might have contributed to the non-significant relationships observed with identification and satisfaction.

One way that I address this limitation is by employing an alternative coding strategy for ethnicity. When I created two groups for ethnicity, white and not white, I had a similar distribution to my coding for gender (i.e. man or woman). Specifically, this new sample had 226 people in the white category and 118 in the not-white category. This is similar to the breakdown for gender (107 men, 230 women). With this two-group ethnicity coding, I also found non-significant relationships with identification and satisfaction, which did not change according to group entitativity levels. This diminishes my concern that the only reason I did not find significant relationships for ethnic diversity is because of sample limitations.

An additional limitation of this study is that I do not differentiate between groups based on the "dominant" gender or ethnicity represented. In other words, a group with 3 men and 1 woman receives the same diversity value as a group with 3 women and 1 man. From a practical perspective, this paper is not addressing the potential differences between these types of groups. Theoretically, we might expect there to be meaningful differences for group members and their perceptions of said groups.

Sample size may have limited the statistical power of this study. Estimating power in multilevel and interaction models is complex (Scherbuam & Ferreter, 2009). Additionally, rules of thumb that do exist are often not appropriate for organizational research (Scherbuam & Ferreter, 2009). This study may have been underpowered, particularly for detecting an interaction. Thus, a replication of these hypotheses with an additional sample would provide more confidence in the results.

Future Research

A main goal of this paper was to apply the study of entitativity to the study of diversity in groups. At least some of my findings support this application. I suggest that future research expand on this. There are many potential questions to ask based on this work: is there a point when too much entitativity is a bad thing, somewhat in line with what van Knippenberg et al. (2004) originally proposed? Could demographic subgroups experience their own entitativity within a larger group? Additionally, researchers should examine other, non-demographic diversity characteristics in conjunction with entitativity. It might be the case that these "deep" diversity characteristics are affected more or less by entitativity than surface level characteristics (Harrison et al., 1998).

While some previous work has focused on entitativity in the context of diversity, little has taken place in interacting groups, let alone interacting work groups. Much of this overlap examines large groups, or more accurately, social categories (Agadullina & Lovakov, 2018). I propose that entitativity research expand into the world of diverse, interacting groups.

Conclusion

This paper offers a first step towards that expansion and provides some initial support for the notion that group-level entitativity can improve the functioning of gender diverse work groups. The findings for ethnically diverse work groups are less clear as group entitativity did not interact with ethnic diversity in any of the tested models. Further, group entitativity did not interact with either gender or ethnic diversity to predict identification. Overall, this paper suggests that entitativity can and should be expanded to the study of demographic work groups, but that its influence is not straightforward.

Further research should embrace this idea and explore when entitativity is enough to improve diverse group outcomes, and when it is not.

TABLE 1: Descriptive statistics for the hypothesized model

Variable	*M*	*SD*	1	2
Individual level				
1. Satisfaction	5.93	1.06		
2. Identification	5.36	1.14	.60** [.53, .66]	
Group level				
1. Gender diversity	0.27	0.20		
2. Ethnic diversity	0.22	0.25	.15 [-.08, .37]	
3. Group entitativity	5.73	0.69	.01 [-.22, .25]	-.12 [-.34, .12]

Note. $N = 347$ individuals nested in $N = 71$ groups. *M* and *SD* indicate the mean and standard deviation, respectively. Values in square brackets indicate a 95% confidence interval for each correlation. ** indicates $p < .01$.

TABLE 2: Aggregation statistics for group-level variables

	Mean $r_{wg(j)}$ (range)	ICC(I)	χ^2 difference
1. Satisfaction	.84 (.00 to .99)	.22	30.88
2. Identification	.78 (.00 to .99)	.27	40.56
3. Entitativity	.81 (.00 to .99)	.23	35.50

Note. R_{wg} >.70 and ICC(I) >.23 are considered adequate for group measures. A chi-square difference of at least 3.84 indicates significance.

TABLE 3: Cross-level results for gender

Variable	Coefficient	Std. Error	df	t-value	p-value
Satisfaction (Step 1)					
1. Intercept	6.03	0.13	276	44.82	0.00
2. Gender diversity	-0.65	0.40	69	-1.63	0.11
Satisfaction (Step 2)					
1. Intercept	5.93	0.05	276	121.01	0.00
2. Gender diversity	-0.78	0.26	67	-3.02	0.00
3. Entitativity	0.78	.07	67	10.60	0.00
4. Gender * Entitativity	0.70	0.39	67	1.78	0.08
Identification (Step 1)					
1. Intercept	5.40	0.15	276	35.22	0.00
2. Gender diversity	-0.44	0.45	69	-0.97	0.33
Identification (Step 2)					
1. Intercept	5.33	0.07	276	80.18	0.00
2. Gender diversity	-0.49	0.34	67	-1.45	0.15
3. Entitativity	0.72	0.10	67	7.31	0.00
4. Gender * Entitativity	0.36	0.52	67	0.69	0.49

Note. In step 1, gender diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

TABLE 4: Cross-level results for ethnicity

Variable	Coefficient	Std. Error	df	t-value	p-value
Satisfaction (Step 1)					
1. Intercept	5.85	0.11	276	54.19	0.00
2. Ethnic diversity	0.03	0.33	69	0.08	0.93
Satisfaction (Step 2)					
1. Intercept	5.94	0.05	276	113.92	0.00
2. Ethnic diversity	0.36	0.22	67	1.64	0.11
3. Entitativity	0.79	.08	67	10.13	0.00
4. Ethnic * Entitativity	0.34	0.32	67	1.03	0.31
Identification (Step 1)					
1. Intercept	5.31	0.12	276	43.92	0.00
2. Ethnic diversity	-0.15	0.37	69	-0.40	0.69
Identification (Step 2)					
1. Intercept	5.33	0.07	276	77.54	0.00
2. Ethnic diversity	0.11	0.28	67	0.40	0.69
3. Entitativity	0.73	0.10	67	7.16	0.00
4. Ethnic * Entitativity	-0.08	0.42	67	-0.18	0.86

Note. In step 1, ethnic diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

TABLE 5: Descriptive statistics for group-level analyses

Variable	*M*	*SD*	1	2	3	4
1. Gender diversity	0.27	0.20				
2. Ethnic diversity	0.22	0.25	.15 [-.08, .37]			
3. Group entitativity	5.73	0.69	.01 [-.22, .25]	-.12 [-.34, .12]		
4. Group satisfaction	5.83	0.69	-.17 [-.39, .06]	.03 [-.21, .26]	.77** [.65, .85]	
5. Group identification	5.25	0.77	-.11 [-.33, .13]	-.04 [-.27, .20]	.62** [.45, .75]	.61** [.44, .74]

Note. $N = 71$. *M* and *SD* indicate the mean and standard deviation, respectively. Values in square brackets indicate a 95% confidence interval for each correlation. ** indicates $p < .01$.

TABLE 6: Group-level results for gender

Variable	Coefficient	Std. Error	df	t-value	p-value
Group Satisfaction (Step 1)					
1. Intercept	6.00	0.14	69	43.91	0.00
2. Gender diversity	-0.58	0.40	69	-1.46	0.15
Group Satisfaction (Step 2)					
1. Intercept	5.83	0.05	67	118.79	0.00
2. Gender diversity	-0.60	0.24	67	-2.47	0.02
3. Entitativity	0.77	.07	67	10.61	0.00
4. Gender * Entitativity	0.88	0.36	67	2.43	0.02
Group Identification (Step 1)					
1. Intercept	5.36	0.15	69	34.81	0.00
2. Gender diversity	-0.41	0.45	69	-0.91	0.37
Group Identification (Step 2)					
1. Intercept	5.25	0.07	67	73.32	0.00
2. Gender diversity	-0.43	0.36	67	-1.21	0.23
3. Entitativity	0.69	0.11	67	6.60	0.00
4. Gender * Entitativity	0.61	0.53	67	1.15	0.25

Note. In step 1, gender diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

TABLE 7: Group-level results for ethnicity

Variable	Coefficient	Std. Error	df	t-value	p-value
Group Satisfaction (Step 1)					
1. Intercept	5.81	0.11	69	53.18	0.00
2. Ethnic diversity	0.08	0.33	69	0.25	0.81
Group Satisfaction (Step 2)					
1. Intercept	5.84	0.05	67	111.83	0.00
2. Ethnic diversity	0.36	0.21	67	1.69	0.09
3. Entitativity	0.78	.08	67	10.21	0.00
4. Ethnic * Entitativity	0.39	0.32	67	1.22	0.23
Group Identification (Step 1)					
1. Intercept	5.27	0.12	69	43.12	0.00
2. Ethnic diversity	-0.11	0.37	69	-0.30	0.77
Group Identification (Step 2)					
1. Intercept	5.25	0.07	67	71.44	0.00
2. Ethnic diversity	0.13	0.30	67	0.43	0.67
3. Entitativity	0.70	0.11	67	6.50	0.00
4. Ethnic * Entitativity	0.11	0.44	67	0.25	0.81

Note. In step 1, ethnic diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

TABLE 8: Cross-level results for alternative ethnicity coding

Variable	Coefficient	Std. Error	df	t-value	p-value
Satisfaction (Step 1)					
1. Intercept	5.90	0.11	276	52.52	0.00
2. Ethnic diversity	-0.23	0.38	69	-0.61	0.54
Satisfaction (Step 2)					
1. Intercept	5.94	0.05	276	113.17	0.00
2. Ethnic diversity	0.17	0.26	67	0.64	0.53
3. Entitativity	0.78	.08	67	10.00	0.00
4. Ethnic * Entitativity	0.41	0.39	67	1.06	0.29
Identification (Step 1)					
1. Intercept	5.32	0.13	276	42.14	0.00
2. Ethnic diversity	-0.20	0.42	69	-0.47	0.64
Identification (Step 2)					
1. Intercept	5.32	0.07	276	77.65	0.00
2. Ethnic diversity	0.10	0.33	67	0.29	0.77
3. Entitativity	0.73	0.10	67	7.15	0.00
4. Ethnic * Entitativity	-0.34	0.49	67	-0.70	0.49

Note. In step 1, ethnic diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

TABLE 9: Group-level results for alternative ethnicity coding

Variable	Coefficient	Std. Error	df	t-value	p-value
Group Satisfaction (Step 1)					
3. Intercept	5.86	0.11	69	51.77	0.00
4. Ethnic diversity	-0.16	0.38	69	-0.41	0.68
Group Satisfaction (Step 2)					
5. Intercept	5.84	0.05	67	109.78	0.00
6. Ethnic diversity	0.18	0.25	67	0.74	0.46
7. Entitativity	0.78	.08	67	10.00	0.00
8. Ethnic * Entitativity	0.41	0.37	67	1.13	0.26
Group Identification (Step 1)					
3. Intercept	5.28	0.13	69	41.65	0.00
4. Ethnic diversity	-0.14	0.43	69	-0.34	0.74
Group Identification (Step 2)					
5. Intercept	5.25	0.07	67	71.31	0.00
6. Ethnic diversity	0.14	0.34	67	0.41	0.69
7. Entitativity	0.70	0.11	67	6.47	0.00
8. Ethnic * Entitativity	-0.19	0.51	67	-0.38	0.71

Note. In step 1, ethnic diversity is the lone predictor. In step 2, I add entitativity and the interaction term to the equation.

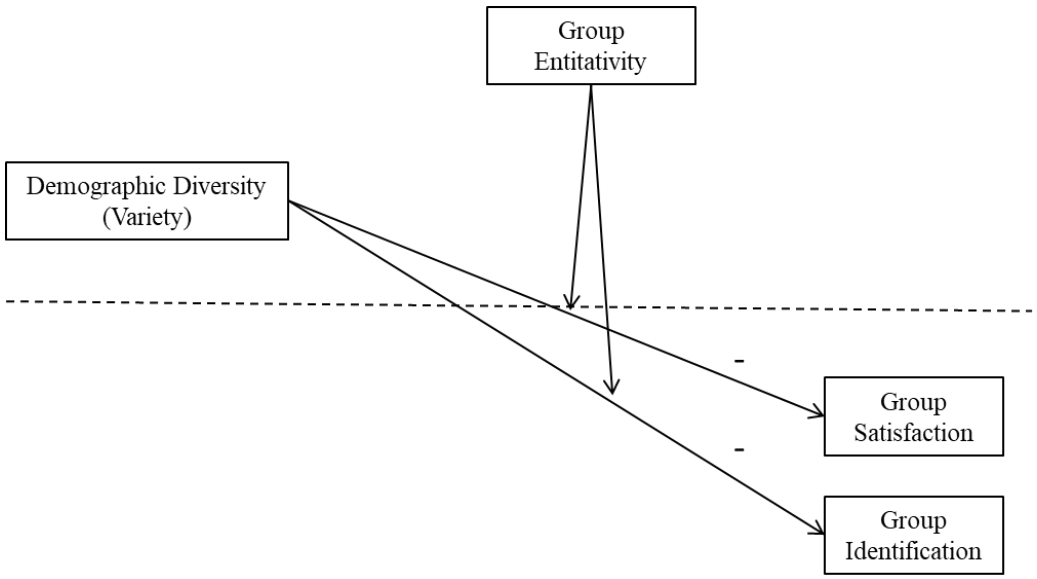

FIGURE 1: Hypothesized model

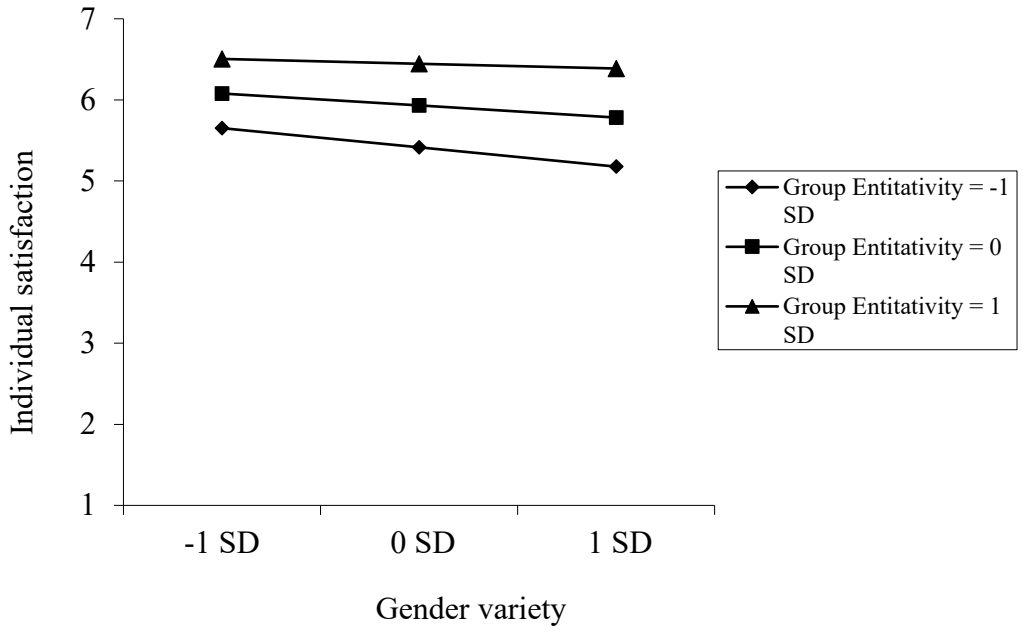

FIGURE 2: Gender diversity on individual satisfaction simple slopes plot

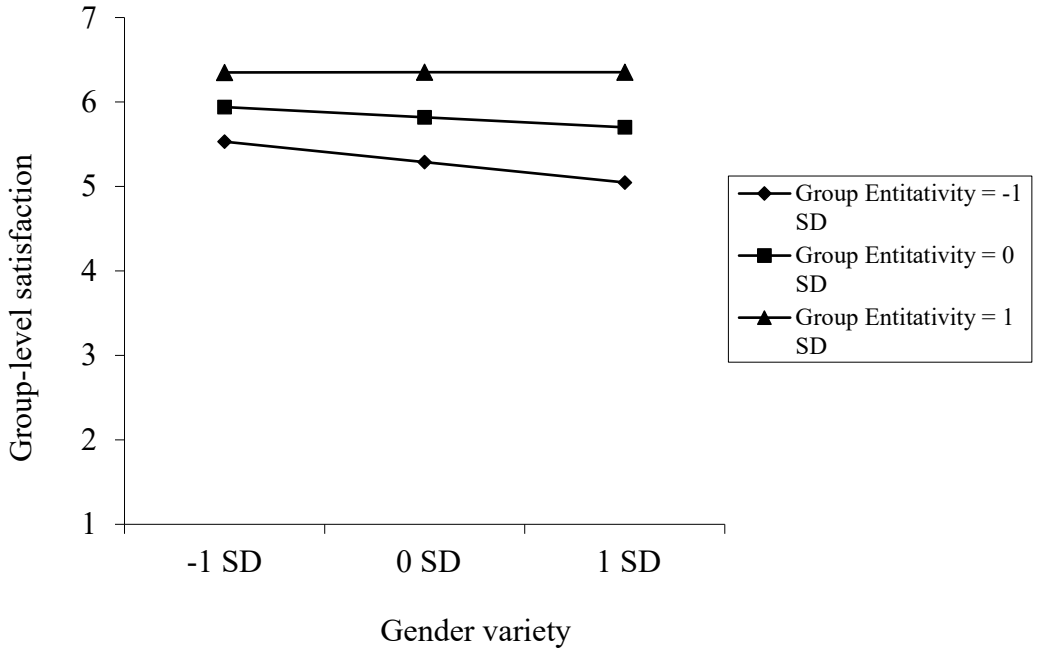

FIGURE 3: Gender diversity on group satisfaction simple slopes plot

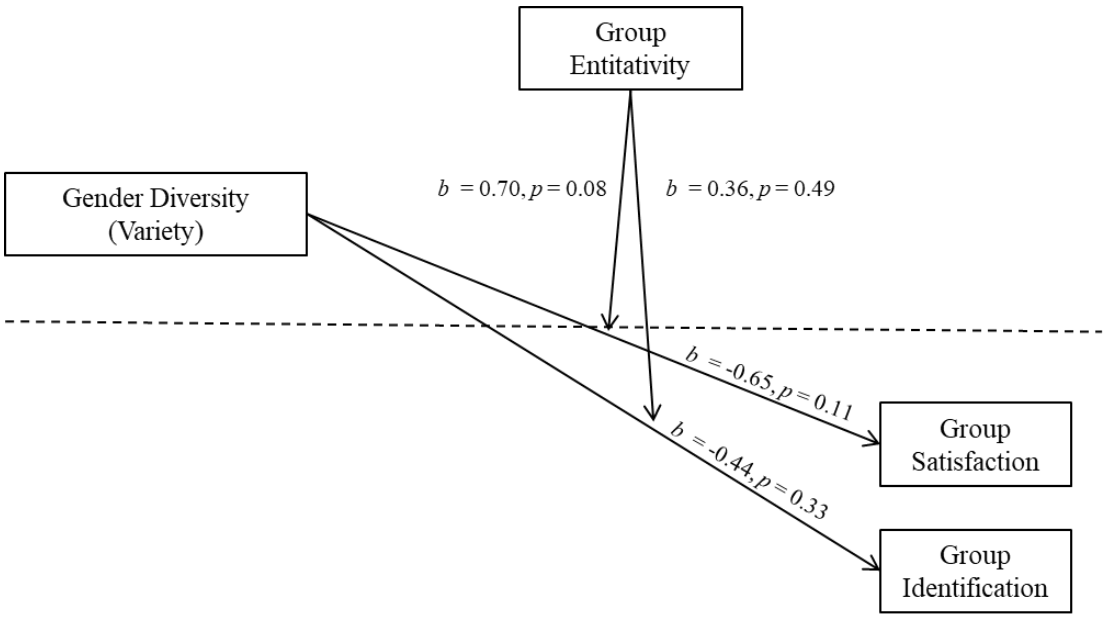

FIGURE 4: Hypothesized gender diversity model with coefficients

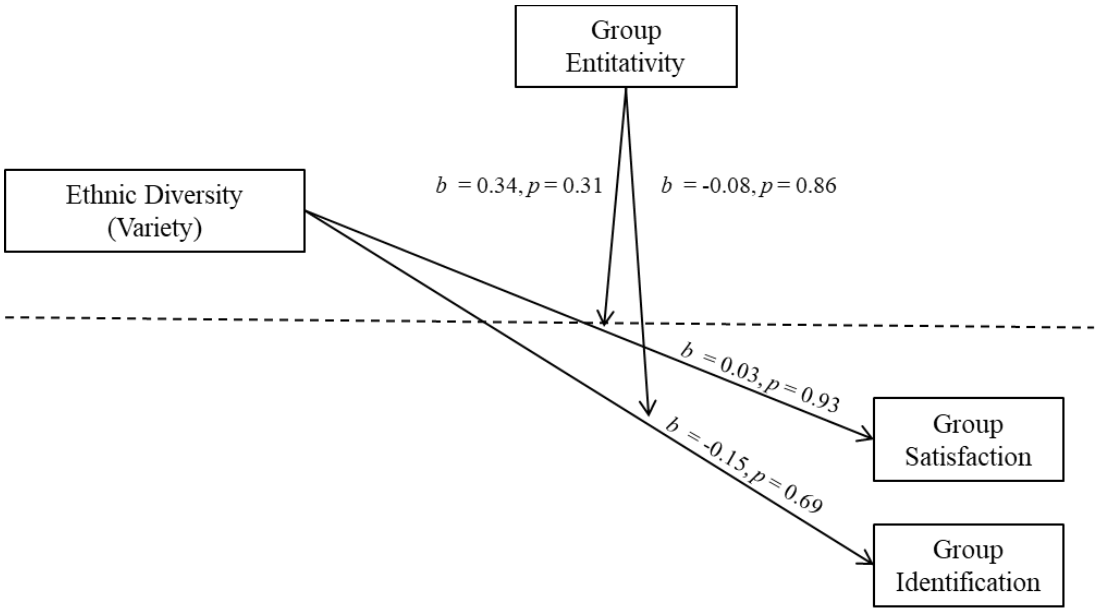

FIGURE 5: Hypothesized ethnic diversity model with coefficients

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