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THE ROLE OF GROUP VALUES IN THE RELATIONSHIP BETWEEN GROUP  
FAULTLINES AND PERFORMANCE

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## THE ROLE OF GROUP VALUES IN THE RELATIONSHIP BETWEEN GROUP FAULTLINES AND PERFORMANCE

### **Abstract**

This study explores the moderating effects of group values on the relationship between group faultlines and performance. Faultlines occur when group members align along two or more different demographic characteristics causing a group to split into homogeneous subgroups (adapted from Lau and Murnighan, 1998). We theorize and empirically examine three group values variables: career-, change-, and task-specificity. Analyses are performed on 81 work groups from a Fortune 500 information processing firm. Two levels of performance are considered in connection with group faultlines: individual performance (performance ratings) and group performance (bonuses and stock options). Our results provide support for our model of group values, faultiness and performance.

**Key words:** group values, group faultlines, and performance

## THE ROLE OF GROUP VALUES IN THE RELATIONSHIP BETWEEN GROUP FAULTLINES AND PERFORMANCE

Reviews of group diversity and relational demography research indicate extremely mixed and often contradictory empirical results relating to the effects of diversity on performance (c.f., Riordan, 2000; Williams and O'Reilly, 1998). Some researchers have shown the positive effects of diversity on performance (Hoffman & Maier, 1961; Hoffman, 1978; Jackson, 1992; Jehn, Northcraft, & Neale, 1999) while others have demonstrated the negative effects (Ancona & Caldwell, 1992; O'Reilly & Flatt, 1989; Steiner, 1972), and the remaining have shown no relationship between diversity and performance (O'Reilly, Williams, & Barsade, 1997). These inconsistent empirical results have led to a lack of consensus regarding a valid conceptual framework (Pelled, Eisenhardt, and Xin, 1999) and have stressed the need for an alternative approach to the conceptualization of diversity. One of the most intriguing advances along these lines comes from the group faultlines theory introduced by Lau and Murnighan (1998).

Since diversity may interact with a variety of other group and organizational factors (Williams and O'Reilly, 1998), another way to explain these inconsistencies in results is to look at the relationship between diversity and performance in a more complex framework and consider the role of contextual variables (Chatman, Polzer, Barsade, & Neale, 1998; Jehn, Northcraft, & Neale, 1999). Few previous studies look carefully at the effects of these factors on the relationship between diversity and outcomes (cf. Chatman, Polzer, Barsade, and Neale, 1997; Jehn, Northcraft, and Neale, 1999). The result is that despite widespread public opinion of the virtues of diversity, the empirically beneficial link between diversity and group, business, or organizational performance remains unproven. Thus, departing from prior research that focused primarily on the direct effects of diversity on performance, we explore *when* and *how* diversity affects performance and *what* organizations can do to translate diversity into positive performance outcomes. In particular, we ask the question: to what extent do contextual factors determine whether workplace diversity is beneficial or detrimental to performance?

Our study combines these two approaches and examines the effects of different group values in the connection to group faultlines and performance. We define group faultlines as hypothetical dividing lines that split a group into subgroups based on two or more characteristics (Lau & Murnighan, 1998). We examine how content-specific group values influence the relationship between group faultlines and performance. One of the most often studied moderators in the diversity research is group values (Jehn, 1994; Probst, Carnevale, & Triandis, 1999). Group

values refer to the individuals' fundamental beliefs regarding the desirability of behavior choices (Enz, 1988; Rokeach, 1973). They reflect, for example, preferred ways to perform individual and group tasks such as being innovative, task-oriented, or career-oriented (Jehn, 1994; Jehn, Chadwick, & Thatcher, 1997; O'Reilly, Chatman, & Caldwell, 1991). Two primary concerns become relevant when researchers conceptualize group values: (1) the extent to which members care about values (value strength), and (2) the extent to which these values differ across settings (value content) (Flynn & Chatman, 2001; Mannix, Thatcher, & Jehn, 2000). The content of values, and sequentially, norms and the behaviors they support, vary widely across groups in an organization. Different norms also often form in workgroups that perform the same tasks (Bettenhausen and Murnighan, 1991; Jehn, 1994). Thus, we examine how different values shape the way in which group faultlines affect performance.

### **Group Faultline Theory**

Initially, group faultline theory was introduced in the organizational diversity literature as a more refined approach to explaining the contradictory effects of diversity on performance (Earley and Mosakowski, 2000; Lau and Murnighan, 1998; Thatcher, Jehn, and Zanutto, in press). Past research on group diversity often, theoretically and empirically, focuses on only one diversity characteristic at a time (e.g., gender) to examine the effect on group processes (e.g., Eagly and Wood, 1991; Harrison, Price, and Bell, 1998) or group outcomes (e.g. Cummings, Zhou, and Oldham, 1993; Thornburg, 1991). In contrast, faultline theory argues that the compositional dynamics of the multiple demographic attributes is crucial in understanding the effects of diversity in workgroups. Differences among group members exist on a number of demographic attributes (e.g., age, race, gender), and these attributes have different impacts on group functioning (e.g., Barsade et al., 2000; Jehn, Northcraft, and Neale, 1999). However, it is the group composition that affects group processes more than the separate demographic characteristics (e.g., Lau and Murnighan, 1998; Thatcher, 1999; Tsui, Egan, and O'Reilly, 1992), as they may operate differently depending on whether other demographic characteristics are present. For example, the experience of a black female middle-aged engineer in a workgroup may differ from that of a white female twenty-something engineer in an otherwise identical workgroup. The faultline theory further argues that it is not only the dispersion of demographic characteristics (i.e., heterogeneity) that influence group processes and outcomes, but also the alignment across members based on multiple characteristics simultaneously considered. Thus, the faultline approach reconceptualizes a traditional understanding of diversity into a more integrative approach to understanding how

multiple forms of diversity simultaneously interact within groups and affect processes and outcomes.

Most diversity and relational demography research focuses on how individuals categorize themselves based on demographic characteristics. It is then assumed that individuals will identify themselves with the categories to which they belong (Tajfel and Turner, 1986). Faultline theory further suggests that the coalitions or subgroups that form actively develop outgroups which are perceived negatively. Thus, faultline theory builds off of social identity (SIT) and social categorization theories (Tajfel and Turner, 1986) and then incorporates coalition theory (Murnighan and Brass, 1991). In a recent study of individual, subgroup and collective categorization in nested social dilemmas, Wit and Kerr (2002) demonstrated that group members' willingness to contribute to the collective interest is lowest when fate is shared at the subgroup level. The concept of demographic alignment – a key feature of faultline theory – goes beyond the traditional understanding of heterogeneity concept because it takes into account the fact that (1) individuals have multiple identities simultaneously (i.e., female, young) rather than one at a time (i.e., female), and (2) these identities are interdependent and interact with one another, thus influencing group processes and performance. Therefore, faultlines theory conceptually accounts for the interdependence among multiple demographic characteristics and alignment of group members on these multiple characteristics.

An example of a group with a strong faultline would be a four-person group consisting of two white male employees who are 21 years old and two black female employees who are 50 years old. In this group, the demographic alignment across members is clear because two homogenous subgroups may emerge based on group members' similarities in gender, race, and age; according to Lau and Murnighan (1998), there is a strong faultline within the group. An example of a group with weak faultline strength would be a four-person group consisting of one 21-year old Asian female, one 21-year old white male, one 25-year old black female, and one 25-year old Native American Indian male. In this latter group, the demographic alignment across members is not as clear as in the first example because two different subgroup possibilities may evolve around the categories of either gender or age. In addition, the two members of age 21 in the second group are closer in age to two members of an opposing faultline of age 25 than of two members of age 50 as in the first group. Thus, two qualities of faultlines may contribute to the extent of the break in the group into subgroups. First, faultline strength captures how many demographic attributes align within the group or, in other words, how cleanly a group splits into two homogeneous subgroups. Second, faultline distance reflects the extent to which subgroups diverge as a result of accumulated

differences across the subgroups (e.g., two members of age 20 are closer in age to two members of an opposing faultline of age 25 than of two members of age 50).

### **A Model of Group Faultlines and Performance Moderated by Group Values**

We define task specificity values as the group members' beliefs about how precise their task focus is. The literature on uncertainty reduction (Jetten, Hogg, & Mullin, 2000) posits that uncertainty about the task might increase the salience of the categories as well as perceptions of threat for group members. Perceptions of threat, in turn, increase category-based responding (Brewer & Miller, 1984). Coalitions may take shape around shared category membership turning the simplest transactions between individuals into opportunities for subgroup competition (Kramer, 1993). These splits, sorts of separatism, and self-segregation along demographic lines may negate the benefits of diversity because individuals no longer interact with diverse others (Schneider & Northcraft, 1999). Diverse group members suspect that their values are mutually exclusive and are likely to perceive conflicts of interests, exhibit the decline in mutual helping behaviors, which eventually lead to separatism and disruptive conflict between subgroups. However, even when diverse individuals do have real differences in their subgroup's values, there may be integrative resolutions that serve the underlying interests of both sides if they work together (Neale & Bazerman, 1992). We reason that directing the team members to focus on the task might add structure and highlighted the importance of each group member's contribution to the team task. In other words, we argue that the group members' attention to the task might redirect their focus away from their specific category membership and reduce category salience and group members' alignment along demographic lines. This consequently will reduce the negative effects of social categorization processes affecting performance and satisfaction. There is some empirical evidence that diverse groups may benefit more when group work endeavor imposes a specific task structure because task specificity triggers clarification of group roles and positions (Brown & Wade, 1987; Maruyama, Knechel, & Peterson, 1992). Therefore, we predict:

**Hypothesis H1 (H1): Groups with strong faultlines will be more likely to have higher levels of performance and satisfaction in groups that emphasize task specificity values.**

We define career-focused group values as group members' beliefs about career advancement opportunities in a group (adapted from Riordan & Shore, 1997). Social identity and social categorization theories (Tajfel & Turner, 1986) provide dimensions along which the group

faultlines can be drawn. Individuals sharing their social category memberships are often assumed by others to share similar career focused values and therefore, to be easier to communicate with, more predictable, more trustworthy, and more likely to reciprocate favors (Brewer, 1981). However, when group members have strong, super-ordinate, or meta-group career focused values, they are more likely to conceptualize themselves as members of this work group instead. The detrimental social categorization processes of in-group/out-group hostility, disliking, and decreased cohesion arising from faultlines are less likely to be activated and cause performance losses (Tajfel & Turner, 1986; Webber & Donahue, 2001). Thus, we predict:

**Hypothesis H2a (H2a): Groups with strong faultlines will be more likely to have higher levels of performance in groups that emphasize career focused values.**

According to social identity and social categorization theories (Tajfel and Turner, 1986), individuals identify, transform, and assimilate their self-conceptions to categories (e.g., engineer, male, black) in order to reduce uncertainty about their feelings, attitudes, and behaviors (Turner, 1985; Turner, Hogg, Oaks, Reicher, & Wetherell, 1987). We propose that the formation of group faultlines can be viewed as an uncertainty reduction mechanism that group members use to reduce a tension within a group. Once the tension is reduced, the employees are likely to become more satisfied in general. However, when a group develops career-focused values, the group members perceive the career opportunities within the group to be limited and compete over them. This is likely to result in tension, disliking and anxiety among group members, and therefore, lessen group members' satisfaction. We therefore hypothesize that:

**Hypothesis H2b (H2b): Groups with strong faultlines will be more likely to have lower levels of satisfaction in groups that emphasize career focused values.**

We define change focused values as the group members' beliefs about possibilities for change and innovation in their group. Research on innovation (Bunce & West, 1995; Scott & Bruce, 1994) and issue selling (Aschford et al., 1998) suggests that work group values and norms that support and encourage change will also facilitate the effective internal channels for the expression and consideration of employee criticism. Since group members are increasingly faced with the uncertainty and anxiety that come with global competition, rapidly changing market environments, organizational downsizing, work-family tensions, and other organizational changes (Pratt, 1992), those channels will provide them with a sense of security and reduce the perceived uncertainty. The group members will be less likely to perceive uncertainty as more threatening to



their relative stability and reliability. This will promote less self-categorization that will lead to less salient differences and, therefore, less chances of forming group faultlines based on group members' demographic characteristics. We propose that members of groups with strong faultlines will be less likely to be involved in mutual inter-subgroup comparisons and competition when these groups emphasize change focused values. Thus they will expend their effort toward task completion and consolidation around mutual goals (Hogg, Turner, & Davidson, 1990; Lau and Murnighan, 1998). Members of such groups will be also likely to be more satisfied with their group in general, because they will perceive a group as a more cohesive due to an increase in perceived security and reduced tension. Therefore, we predict the following hypotheses:

**Hypothesis H3 (H3): Groups with strong faultlines will be more likely to have higher levels of performance and satisfaction in groups that emphasize change focused values.**

## METHODS

### Research Site and Sample

Our sample includes 78 groups in a large corporation within the computer industry. In this company, employees work in groups in a range of divisions such as corporate administration, finance, sales, product development, software systems, and manufacturing. We identified the workgroups using a reporting system developed by the company, and information about the structure of the divisions and departments provided by key senior staff. We verified that these were actual working groups (i.e., they interacted on a day-to-day basis, were task interdependent, identified each other as group members, and were seen by others as workgroups) by interview and observation. We were informed by key senior staff and employees that "groups" of one or two employees or groups with over sixteen employees were not actual working groups. This is consistent with our definition of a group (see above) and with group process theories regarding group size. Therefore, we eliminated such "groups" from our analysis leaving a sample of 78 groups and 518 individuals with complete demographic and performance data. The age of employees ranged from 26 to 69 years with a mean of 46 years. Seventy one percent of the employees were male. The majority of employees (88%) were white; 7% were African American, 2.7% Asian, 2.3% Hispanic. The level of education ranged from grade school to the Ph. D. level; the modal level was a Bachelor's degree. Tenure with the company ranged from less than one year to 43 years with a mean of 15 years. Work functions included 22 distinct categories (e.g. customer service, finance, marketing).

## Measures

**Group Faultlines Variables.** We measured strength and distance components of faultlines along six demographic characteristics (race, age, gender, level of education, tenure with the company, and functional background). These characteristics were chosen based on previous research on group diversity (Williams and O'Reilly, 1998) and availability in the dataset. To measure faultline strength, we use a faultline algorithm and a rescaling procedure developed by Thatcher, Jehn, and Zanutto (in press). Thatcher et al's *Fau* measure calculates the percent of total variation in overall group characteristics accounted for by the strongest group split by calculating the ratio of the between group sum of squares to the total sum of squares:

$$Fau_g = \left( \frac{\sum_{j=1}^p \sum_{k=1}^2 n_k^g (\bar{x}_{\bullet jk} - \bar{x}_{\bullet j\bullet})^2}{\sum_{j=1}^p \sum_{k=1}^2 \sum_{i=1}^{n_k^g} (x_{ijk} - \bar{x}_{\bullet j\bullet})^2} \right) \quad g = 1, 2, \dots, S,$$

where  $x_{ijk}$  denotes the value of the  $j^{th}$  characteristic of the  $i^{th}$  member of subgroup  $k$ ,  $\bar{x}_{\bullet j\bullet}$  denotes the overall group mean of characteristic  $j$ ,  $\bar{x}_{\bullet jk}$  denotes the mean of characteristic  $j$  in subgroup  $k$ , and  $n_k^g$  denotes the number of members of the  $k^{th}$  subgroup ( $k=1,2$ ) under split  $g$ . The faultline strength is then calculated as the maximum value of  $Fau_g$  over all possible splits  $g = 1, 2, \dots, S$ . We calculated the faultline strength scores considering only splits in which each subgroup has at least two members, thus excluding "token" splits (i.e., subgroups consisting of only one member). Faultline strength can take on values between 0 and 1 with larger values indicating greater strength. Possible values of faultline strength ranged from .381 (weak faultline strength) to .958 (very strong faultline strength) in our dataset.

To measure faultline distance, we use a distance score (Bezrukova, Jehn, and Zanutto, 2002), which captures the degree of difference between two subgroups. The faultline distance measure is adapted from multivariate statistical cluster analysis (e.g. Morrison, 1967; Jobson, 1992; Sharma, 1996) and is calculated as a distance between centroids (the Euclidean distance

between the two sets of averages):  $D_g = \sqrt{\sum_{j=1}^p (\bar{x}_{1j\bullet} - \bar{x}_{2j\bullet})^2}$ , where centroid (vector of means of each variable) for subgroup 1 =  $(\bar{x}_{11\bullet}, \bar{x}_{12\bullet}, \bar{x}_{13\bullet}, \dots, \bar{x}_{1p\bullet})$ , centroid for group 2 =  $(\bar{x}_{21\bullet}, \bar{x}_{22\bullet}, \bar{x}_{23\bullet}, \dots, \bar{x}_{2p\bullet})$ . Faultline distance can take on values between 0 and  $\infty$ , with larger values indicating larger distance between the resulting subgroups. The faultline distance measure takes into account multiple

characteristics of group members by calculating scores for both continuous and categorical variables simultaneously. Possible values of faultline distance in our dataset ranged from .707 (weak faultline distance) to 2.790 (very strong faultline distance). Table 1 provides examples of demographic compositions of various diverse groups and their resulting *Fau* strength and distance scores.

-----INSERT TABLE 1 ABOUT HERE-----

### **Content Analyses**

To generate measures of group values and satisfaction, we content-analyzed company documents that were part of a human resource-sponsored program. As a module of this program designed to help managers and supervisors of workgroups in their planning, employees completed Development Reports regarding their workgroups. The Reports capture the dominant values in work groups and the level of members' satisfaction with group experience. Employees submit their information directly over the corporate intranet or via the internet. This information is confidential and available only to the employee, his or her direct manager and a selected group of Human Resource personnel.

We developed lists of key words characterizing each variable under study based on relevant group and organizational theories, as well as the concepts used in the company's rhetoric. We ran computer-aided text analysis on the company's textual data using the program MonoConc Pro 2.0 (Barlow, 2000) and created frequency lists with the terms mentioned most to least often. To arrive at the key word lists for each variable, three raters first independently considered all terms from the frequency lists and selected the key words representing each variable under study. They then discussed their respective lists of key terms and composed the final lists containing only the words that they agreed upon (see Appendix 1). Following the method of Jehn and Werner (1993), two independent raters further conducted the key word searches on all individual responses, reviewed the surrounding context and coded the text for each variable of interest as defined by theory. In particular, the raters jointly went through the first few individual responses to develop the coding guidelines (see Appendix 2 for the details). They coded the rest of the responses individually. The raters followed guiding questions (see Appendix 2) to evaluate each variable of interest for each individual response on a scale from 1 (the least) to 7 (the most). The inter-rater agreement ranged from 89% to 97% on the variables and was determined by checking the number of times that the raters agreed upon the score which they assigned to an individual response. When raters rated a

response farther than 1 point apart, they discussed the response until they reached an agreement and then, they refined their coding rules.

**Group Values.** Three different types of content specific values (career, change, and task specificity) were identified by content coding the company's textual data. The extent of group members' beliefs about career advancement opportunities and professional success in their group indicated the degree of career focused values. The extent of group members' beliefs about possibilities for change, innovation, creativity and exploring new perspectives in their group indicated the degree of change focused values. The extent of group members' beliefs about how precise their task focus is toward business operations and getting results indicated the degree of group task specificity values. The raters defined the extent or degree of each type of values indicated by the employee on a scale from 1 (no values) to 7 (extreme amount of values). An illustrative example from the data demonstrating career focused values is provided below.

“Technology transfer within the department **through a massive training effort**. Buy-in and dedication from business community. Technical transfer to existing staff during the entire process. Change in staffing level during conversion. Provide comprehensive and efficient resources to support business growth and allow for needed bench strength. **Reshape the make-up of the department**. Develop business knowledge as well as technical skills. Move people into jobs that are different from what they are doing today. **Develop training sessions** during end 1999 and all of 2000. **Give people the opportunity and exposure they need to advance.**”

**Satisfaction.** We specified two separate variables to indicate members' satisfaction and dissatisfaction: Satisfaction is defined as the degree to which the experience exceeds an individual's comparison level; experiences that fall below the standard of comparison are experienced as dissatisfaction (Gillespie, Brett, and Weingart, 2000; Rusbult and Van Lange, 1996). The raters coded both variables using a seven point Likert scale (e.g., 1 = low satisfaction, 7 = high satisfaction). Examples of satisfaction and dissatisfaction are:

“...**Sustain strong no.1 market position** in core mail finishing while **accelerating growth** in systems, professional services, and other new business initiatives. Our ability and effectiveness in influencing worldwide posts to implement favorable policies are critical to achieving business objectives. **Continue to deliver strong bottom line results** through process reengineering while simultaneously implementing the IS information support platform... Hire project manager to **drive implementation of best-in-breed product development practices** and metrics...”

“... Systems support - **I have had to supply my own software** and hardware to perform work duties... **concerns have been raised** with Regional Manager. Handheld data

terminals techs **spend too much time reloading** software and repairing data terminals... Systems support (Reporting systems) - **Employee measurement systems are slow and can not reflect reality within the report structure.** Initiatives have been started within the Western service group to develop our own reports...”

### **Performance**

We measure group performance based on employees’ archival bonus data. Bonus amounts are the actual bonus amounts paid out for the year and are calculated based on group performance. Stock options rewarded on the basis of group performance were also available in our data set; stock options refer to the number of options awarded.

We also had indicators of individual performance such as performance ratings. Individual performance ratings are the codes indicating whether the productive output of the individual meets or surpasses specific performance goals and are associated with an employees' performance review (e.g. 5 refers to outstanding performance, and 1 refers to unsatisfactory).

### **Controls**

We included group size as control variables. Group size has been shown to be of a great importance for group processes and outcomes (Goodman, Ravlin, and Argote, 1986). This control variable was obtained from the archival file data provided by the company.

## **RESULTS**

Table 2 displays means, standard deviations, and correlations among all variables. As expected, faultline strength and faultline distance are positively correlated with each other. Task specificity, career-focused, and change-focused values are highly correlated and positively related to performance outcomes and satisfaction. The performance measures are highly correlated indicating that the bonuses, stock options, and performance ratings measure similar aspects of performance. We examine the relationships between faultlines, group values, and performance further using hierarchical regression analyses.

-----INSERT TABLE 2 ABOUT HERE -----

### **Moderating Effects of Task Specificity Values**

We conducted hierarchical regression analyses to test our hypotheses predicting the moderating effects of task specificity group values on the relationship between faultline strength and distance and different performance outcomes. Step 1 includes controls (group size), step 2 includes the main effects of faultline strength and distance, and task specificity group values, step

3 includes the two hypothesized interactions (faultline strength x task specificity; faultline distance x task specificity).

-----INSERT TABLE 3 ABOUT HERE -----

In partial support of H1, task specificity group values moderate the effect of faultlines on performance ratings and satisfaction.

### **Moderating Effects of Career-Focused Values**

We conducted hierarchical regression analyses to test our hypotheses predicting the moderating effects of career-focused group values on the relationship between group faultlines and performance outcomes. Step 1 includes controls (group size), step 2 includes the main effects of faultline strength and distance, and career-focused group values, step 3 includes the two hypothesized interactions (faultline strength x career-focused values; faultline distance x career-focused values).

-----INSERT TABLE 4 ABOUT HERE -----

In support of H2b, career-focused group values moderate the effects of faultlines on satisfaction.

### **Moderating Effects of Change-Focused Values**

We conducted hierarchical regression analyses to test our hypotheses predicting the moderating effects of change-focused group values on the relationship between group faultlines and different performance outcomes. Step 1 includes controls (group size), step 2 includes the main effects of faultline strength and distance, and change-focused group values, step 3 includes the two hypothesized interactions (faultline strength x change-focused values; faultline distance x change-focused values).

-----INSERT TABLE 5 ABOUT HERE -----

Results provide support for the hypothesis H3 predicting the moderating effect of change-focused values on the relationship between group faultlines and performance and satisfaction

To provide the proper treatment of our cross-level variables and to further examine the moderating effects of group values on the relationship between group faultlines and performance, we plan to run Hierarchical Linear Modeling. This method will allow the testing of our hypotheses across levels of analyses and the investigation of the influence of higher-level units (group faultlines) on lower level outcomes (individual performance ratings) while maintaining the appropriate level of analysis. Additionally, HLM is well suited for estimating effects when group sizes differ. To be continued!!

## DISCUSSION

This field study examines the moderation effects of group values (i.e. task specificity, career-focused, and change-focused group values) on the relationship between group faultlines (i.e. faultline strength and distance) and multiple group outcome variables (e.g. individual performance ratings, group performance, bonuses, stock options, and group-level employees' satisfaction).

The strengths of the current research—data collected from actual social settings—are accompanied by potential weakness. Because we have not experimentally manipulated the causal factors (faultline strength and distance) to which we attribute the findings, the possibility remains that our causal logic could be reversed.

A major theoretical contribution of this paper is looking at the concept of group values from the content-specific perspective. In particular, we theorize the moderating effects of group values in terms of group members' task, career, and change focus in connection with group faultlines and performance. We also predict different effects across different levels of performance outcomes (individual performance, group-level performance, and group level satisfaction), which have not yet been done in the past. We also contribute to the research by operationalizing constructs that have been theorized about, but not yet empirically tested (e.g., group faultlines). We apply the *fau* algorithm (Thatcher, Jehn, and Zanutto, 2000) to measure two aspects of group faultlines: faultline strength reflecting how deep the group faultline is and faultline distance reflecting how wide the faultline is in a group. This combination of the *fau* score and the *fau* distance score provides useful information that has not yet been depicted by past diversity research thus far.

To summarize, this study is fruitful because it provides the empirical test of group faultline theory and explores further how group faultlines affect workgroup performance. It also opens the door to future research of exploring the concept of values in connection with faultlines in work groups. For example, future research is needed to investigate how group culture conceptualized in terms of group value consensus and group value fit (Jehn, 1994) would influence the group faultlines-performance link. Another possibility for research is to explore the congruence between group-level and organization-level (or Business Unit-level) values. Specifically, how congruence or non-congruence of group and higher-level values might influence the effects of group faultlines on specific performance outcomes, how different these outcomes might be, and which performance outcome might be more sensitive.

To be continued!!!!

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Appendix 1: Examples of key words for the content-analyzed variables.

Change Focused Values:

grow, growth, trend, change, emerge, expand, progress, future, new opportunities, innovative, reorganize

Career Focused Values:

Training, benefits, certification, advancement, retention, development, incentives, assessment, recruit, career, competencies, staffing, promote, compensation, learning, mentoring

Task Specificity Focused Values:

customer, market, product, business, finance, profit, project, brand, service

Satisfaction:

happy, well, best, better, improve, win, success, improve, gain, great, positive, accomplished, satisfied, best-of-breed, success, efficient, effective, gain, improved

Dissatisfaction:

dissatisfaction, weak, stress, negative, unreliable, inconsistent, ineffective, failure, reduction, losses, decreased, lessen, not, cannot, bad, loss, poor, mislead, exploit

## Appendix 2. Content analysis rules.

### I. CODING PROCEDURE:

1. Three raters jointly go through the first 5-10 individual responses to develop the initial rules.
2. Then two raters go through all the responses to find extreme case examples (that is examples of approximately low and high values, satisfaction, or dissatisfaction), to indicate the scale range.
3. The raters individually rate these examples.
4. Then to figure out the scale, the raters jointly discuss their scores for the above examples and sort out any discrepancies.
5. Next both raters independently rate 30 random responses to compare their responses, and then discuss these to sort out further differences. By now the raters should have a good sense of the scale and should achieve agreement on most scores, with a difference of no more than 1 for corresponding individual scores.
6. Finally, two raters score the rest of the responses.

### II. QUESTIONS FOR THE RATERS:

To what extent does a group have change oriented values? (change focused values)

To what extent does a group have career oriented values? (career focused values)

To what extent does a group have task specific values? (task specificity values)

To what extent are group members satisfied with the group work? (Satisfaction)

To what extent are group members dissatisfied with the group work? (Dissatisfaction)

### III. GUIDELINES

- The unit of analysis is the entire individual response; use all context available in the response to arrive at the score.
- Base your decision on all relevant statements indicating the variable being scored; highlight the key sentences (ex. for career focused values: "...**Develop training sessions** during end 1999 and all of 2000. **Give people the opportunity and exposure they need to advance...**")
- Assign missing values to a response that exhibits an unusually low level of comprehensibility due to incomplete or poor sentence structure, or grammar and spelling mistakes (e.g the rater cannot understand what the person is saying)
- When scoring the response for the variable, first place it within a range of low to moderate (scores from 1-4), or moderate to high (scores from 4-7). Second compare the response to other responses with scores within the same range. Based on the comparison, choose the respective score for the response.

Table 1. Examples of faultline strength and faultline distance scores.

Member	Age	Race	Gender	Tenure	Function	Education	Faultline Strength	Faultline Distance
Team 1							<b>0.8057</b>	<b>2.9334</b>
1	65	1	1	26	3	5		
2	37	1	1	2	3	7		
3	50	1	0	26	3	4		
4	36	1	1	4	3	7		
5	46	1	0	1	3	7		
Team 2							<b>0.8304</b>	<b>2.0265</b>
1	61	2	1	6	1	7		
2	34	1	0	10	1	5		
3	45	1	0	4	1	5		
4	47	2	1	9	1	7		
5	37	1	0	1	1	5		
Team 3							<b>0.4151</b>	<b>1.6671</b>
1	48	0	1	4	3	1		
2	44	0	2	3	5	1		
3	42	0	1	18	4	1		
4	41	1	1	3	6	1		
5	34	0	1	2	5	4		
Team 4							<b>0.4280</b>	<b>1.1995</b>
1	41	1	1	2	5	2		
2	40	1	1	16	5	2		
3	43	0	1	3	5	2		
4	34	1	1	5	5	2		
5	31	1	1	3	5	2		

Table 2. Means, Standard Deviations, and Zero-Order Correlations Among Variables.

Variables	M	SD	Correlations									
			1	2	3	4	5	6	7	8	9	
1.Faultline Strength	.49	.12										
2.Faultline Distance	1.88	.46	.487*									
3.Task Specificity Values	4.45	2.01	.100	.197**								
4.Career-Focused Values	4.11	1.95	.300**	.108	.538**							
5.Change-Focused Values	4.54	1.78	.098	.163**	.532**	.481**						
6.Bonuses	30218.4	35675.3	-.052	.008	.323**	.341**	.499**					
7.Stocks	1461.88	2058.03	-.16**	-.048	.061	.154**	.360**	.837**				
8. Dissatisfaction	3.33	2.09	-.089	-.17**	.417**	.328**	.310**	.347**	.219**			
9. Satisfaction	3.95	1.98	.073	.078	.558**	.547**	.542**	.512**	.379**	.313**		
10. Performance Ratings	3.88	.70	.067	-.035	.022	.111	.012	.193**	.066	.042	.029	

\*p<.05; \*\*p<.01 (two-tailed); N = 518.



Table 3. Hierarchical Regression Analyses (N = 518)

	Performanc e Ratings	Bonuses	Stock Options	Dissatisfact ion	Satisfaction
Step 1: Controls					
Group Size	-.005	.147*	.046	.166**	.222***
Adjusted R2	-.003	.018	-.001	.024	.046
F	.006	6.618*	.627	8.440**	15.400***
Step 2: Main Effects					
Faultline Strength (FauS)	.141	-.030	-.174*	.096	.119
Faultline Distance (FauD)	-.141	-.077	.017	-.400***	-.152*
Task Specific Values(TSV)	.016	.282***	.067	.387***	.509***
Change in R2	.016	.074	.026	.230	.255
F change	1.585	8.098***	2.644*	30.502***	36.060***
R2	.016	.096	.028	.258	.304
Adjusted R2	.003	.084	.015	.248	.295
F	1.191	7.846***	2.142 <sup>†</sup>	25.613***	32.254***
Step 3. Interactions					
FauS X TSV	.835**	.283	.238	.052	-1.375***
FauD X TSV	-.593	-.280	-.283	-.576*	.497*
Change in R2	.024	.004	.003	.016	.066
F change	3.740*	.583	.489	3.281*	15.282***
R2	.040	.100	.031	.274	.370
Adjusted R2	.021	.081	.012	.259	.357
F	2.055 <sup>†</sup>	5.410***	1.586	18.433***	28.679***

\*p&lt;.05; \*\*p&lt;.01; \*\*\*p&lt;.001.

Table 4. Hierarchical Regression Analyses (N = 518)

	Performance Ratings	Bonuses	Stock Options	Dissatisfaction	Satisfaction
Step 1: Controls					
Group Size	-.005	.147*	.046	.166**	.222***
Adjusted R2	-.003	.018	-.001	.024	.046
F	.006	6.618*	.627	8.440**	15.400***
Step 2: Main Effects					
Faultline Strength (FauS)	.092	-.190**	-.295***	-.038	-.105
Faultline Distance (FauD)	-.098	.052	.096	-.252***	.045
CareerFocus Values(CaV)	.088	.388***	.248***	.334***	.560***
Change in R2	.019	.125	.075	.160	.273
F change	2.004	14.972***	8.315***	20.090***	40.983***
R2	.019	.146	.077	.185	.318
Adjusted R2	.006	.134	.065	.175	.309
F	1.505	13.079	6.408***	17.453***	35.778***
Step 3. Interactions					
FauS X CaV	.353	.031	.306	-.374	-.659*
FauD X CaV	.202	-.263	-.337	-.359	.067
Change in R2	.008	.002	.004	.014	.012
F change	1.192	.429	.627	2.571	2.674
R2	.027	.148	.081	.199	.330
Adjusted R2	.008	.131	.063	.183	.317
F	1.402	8.830***	4.471***	12.611***	25.004***

<sup>†</sup> p < .1; \*p<.05; \*\*p<.01; \*\*\*p<.001.

Table 5. Hierarchical Regression Analyses (N = 518)

	Performanc e Ratings	Bonuses	Stock Options	Dissatisfact ion	Satisfaction
Step 1: Controls					
Group Size	-.005	.147*	.046	.166**	.222***
Adjusted R2	-.003	.018	-.001	.024	.046
F	.006	6.618*	.627	8.440**	15.400***
Step 2: Main Effects					
Faultline Strength (FauS)	.134 <sup>†</sup>	-.079	-.235***	0.77	.087
Faultline Distance (FauD)	-.119	-.041	.037	-.332***	-.089
Change-FocusValues(ChV)	.005	.510***	.404***	.305***	.517***
Change in R2	.013	.240	.174	.154	.261
F change	1.331	33.209***	21.672***	19.179***	38.500***
R2	.013	.261	.176	.179	.306
Adjusted R2	.000	.251	.166	.168	.297
F	1.000	27.044***	16.446***	16.752***	33.829***
Step 3. Interactions					
FauS X ChV	.530	-.369	-.473	-.464	-2.595***
FauD X ChV	.065	.903*	.678 <sup>†</sup>	-1.573***	1.547***
Change in R2	.009	.016	.009	.084	.144
F change	1.341	3.271*	1.779	17.450***	39.941***
R2	.021	.276	.186	.263	.450
Adjusted R2	.002	.262	.170	.249	.439
F	1.115	19.387***	11.613***	18.181***	41.587***

<sup>†</sup> p < .1; \*p<.05; \*\*p<.01; \*\*\*p<.001.