

The social identity and social networks of ethnic minority groups in organizations: a crucial test of distinctiveness theory^{†,‡}

ANA SIERRA LEONARD^{1*}, AJAY MEHRA² AND RALPH KATERBERG³

¹*Department of Management, College of Business, University of Cincinnati, Cincinnati, Ohio, U.S.A.*

²*LINKS—International Center for Research on Social Networks in Business, Gatton College of Business and Economics, University of Kentucky, Lexington, Kentucky, U.S.A.*

³*Department of Management, College of Business, University of Cincinnati, Cincinnati, Ohio, U.S.A.*

Summary

Distinctiveness theory posits that patterns of social identity and friendship are based on numeric rarity within specific contexts. In ethnically diverse organizations, the theory predicts that members of the smaller ethnic group (relative to members of the larger ethnic group) will: (a) tend to identify and form friendships within their own ethnic group, and (b) lack access to well-connected individuals in the network of friendship relations. Prior tests have supported these predictions, but they have been unable to rule out the possibility that it was chronic differences in social status and numeric representation in society at large (rather than numeric distinctiveness within specific contexts) that explained the observed patterns of social identity and friendship. In this field-based study, we examined an organization whose social composition effectively controlled for these confounds. We found that members of the smaller ethnic group tended to identify and form friendships within group, as predicted by distinctiveness theory. However, in contrast to previous work, we found that members of the smaller ethnic group were equally well connected to the center of the friendship network as were the members of the larger ethnic group. Copyright © 2007 John Wiley & Sons, Ltd.

Introduction

The study of informal relations between members of different ethnic groups has been the focus of sustained sociological analysis in the United States for decades (e.g., Park, 1939/1950). The topic has

*Correspondence to: Ana Sierra Leonard, College of Business, University of Cincinnati, Cincinnati, OH 45221, U.S.A.

E-mail: ana.leonard@uc.edu

[†]We use the terms 'ethnicity' and 'race' interchangeably in this paper rather than resorting to more cumbersome forms, such as 'race/ethnicity,' currently in circulation (e.g., Gaines et al., 1997). When reporting the results of previous studies, however, we have retained the terminology used in the original, a point that also applies to our usage of specific names for minority groups (e.g., blacks vs. African Americans; Latinos vs. Hispanics). For a discussion of the confusion and contestation surrounding the use of the terms 'race' and 'ethnicity,' see, for example, Goldberg (1992), Marshall (1998), and Yanow (2003).

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received less attention in organizational studies, but this state of affairs appears to be changing rapidly (for a review, see Proudford & Nkomo, 2006). A key reason that the study of ethnic relations is moving from the margins to a more central place in organizational scholarship is that the workforce has become markedly more diverse, and this has fuelled vigorous interest in the consequences of ethnic diversity in organizational settings. Given the importance of informal social interactions in organizational life (e.g., Brass, Galaskiewicz, Greve, & Tsai, 2004; Roethlisberger & Dickson, 1939) and persistent reports of the exclusion of members of racial minority groups from such interactions (e.g., Hughes, 1946; Karsten, 2006), a question that deserves greater attention from organizational researchers is: How does ethnic diversity within an organization influence informal relations among its members?

Perhaps the most influential theoretical approach to this question draws on the 'homophily' principle (Lazarsfeld & Merton, 1954: p. 23), which posits a 'tendency for friendships to form between those who are alike.' Sociological research has consistently shown (see McPherson, Smith-Lovin, & Cook, 2001 for a review) that the preference for similar others can exert a powerful effect on the structure of social interactions, especially interactions, such as friendship, that are expressive in nature (Blau, 1977). But could the preference for similar others produce different structures of social interaction among minority group members than among majority group members? Distinctiveness theory offers an answer.

In its original formulation, distinctiveness theory was used to investigate how likely people are to think of themselves in terms of a given personal characteristic, such as gender or race (see McGuire, 1984 for a review). Drawing on a contextualist philosophy of science (McGuire, 1983), the theory proposed that the phenomenal, or 'spontaneous,' self-concept is not fixed; it changes in predictable ways as a person moves from one social setting to another. According to distinctiveness theory, the self is a rich and complex stimulus object. When people try to make sense of who they are, they rely on perceptual selectivity to manage informational overload (McGuire & Padawer-Singer, 1976: p. 744). Specifically, the theory proposes that numeric rarity influences what is selected in perception. Why the emphasis on numeric rarity? Because 'the person in a complex stimulus field focuses on points of maximum information, so that one selectively notices the aspects of the object that are most peculiar (i.e., numerically rare)' (McGuire & Padawer-Singer, 1976: p. 744; cf. Nelson & Miller, 1995). However, characteristics that are rare in one context may not be rare in others. Thus, African Americans when in a group of whites will tend to think of themselves in terms of their race. But the same African Americans are unlikely to think of themselves in terms of their race when in a group composed primarily of other African Americans.

A previous study (Mehra, Kilduff, & Brass, 1998) extended the reach of distinctiveness theory from its roots in the study of the spontaneous self-concept to the realm of social identity and friendship relations. It refined the general homophily proposition, which specifies that people are drawn to similar others, by suggesting that similarity and friendship are based on numeric distinctiveness within specific contexts. Using a sample of 159 individuals enrolled in a master of business administration program, the study found support for the distinctiveness hypothesis that the lower the relative proportion of group members in a social context, the higher the likelihood of within-group identification and friendship: Racial minorities (who made up 13 per cent of the sample) were significantly more likely to identify and form friendships within-group than were the majority whites. Coupled with exclusionary pressures, this heightened preference for same-race others contributed to the positioning of racial minority members on the margins of the friendship network—members of racial minority groups tended to lack direct or indirect friendship ties to well-connected, 'central' individuals (i.e., people who had numerous ties to people who themselves had numerous ties) in the friendship network. This lack of access to the center of the network is potentially problematic because network centrality has been shown to be related to a range of positive outcomes, such as performance and power (for reviews of the literature on social networks in organizations, see Brass et al., 2004; Kilduff & Tsai, 2003).

Although there is evidence of the potential usefulness of distinctiveness theory for understanding emergent patterns of identity and friendship among members of different ethnic groups in organizations, prior empirical work has been unable to test two crucial aspects of the theory. First, an important element of distinctiveness theory is the argument that perceptions of similarity are not immutable; rather, they are relative to the social context. Preference for same-race others, from the perspective of distinctiveness theory, is not just a matter of the race to which one belongs: it is also a function of the racial composition of the particular social setting in which one finds oneself. The prior empirical work on distinctiveness theory has been unable to test this idea because the proportions of different groups in the samples examined have been similar to those in the broader population, making it impossible to tell whether the effects observed were due to the proportions present in a particular social setting or due to differences in the proportions in which the different groups were present in society at large (e.g., McGuire, McGuire, Child, & Fujioka, 1978: p. 515)

Second, the observed pattern of identity and friendship choices may have been influenced not just by social context, but also by the social status of different groups in society (Mehra et al., 1998: p. 447). A characteristic can be said to possess status value 'when consensual cultural beliefs indicate that persons who have one state of the characteristic (e.g., whites or males) are more worthy in the society than those with another state of the characteristic (blacks or females)' (Ridgeway, 1991: p. 368). Race is a characteristic that is imbued with independent status value in American society: people widely assume that 'it is more worthy or valuable to be male than female or white than black' (see Berger, Rosenholtz, & Zelditch, 1980; Ridgeway, 1991: p. 368; Ridgeway & Berger, 1986). Race can influence social evaluation and interaction because of widely held stereotypes that link characteristics such as race with social status (Ely, 1995; cf. Ibarra, 1995; Ridgeway, 1991). Racial minority members may have been on the margins of the friendship network in past studies, therefore, not because of their numeric under-representation in the specific organization that was examined but, instead, because of their lower social status in society at large (cf. Ely and Thomas, 2001: p. 232). By selecting for this study a sample whose ethnic composition allowed us to effectively control for the confounding effects of social status and numeric representation in society at large on identification and friendship patterns, we were able to conduct a 'crucial test' (Stinchcombe, 1987: pp. 24–28) of distinctiveness theory.

Theory and Hypotheses

Distinctiveness, social identity, and friendship

The idea that a characteristic's novelty enhances its perceptual salience has appeared in the work of diverse theorists, going at least as far back as Pavlov's (1928) concept of the orienting reflex (see McGuire, 1984: p. 83 for a historical review). In the 1970s, McGuire and his co-workers formalized this insight and used it to study individuals' spontaneous self-concepts. Their formulation of the distinctiveness postulate argued that we are conscious of ourselves insofar as we are different from the people around us; we perceive ourselves in terms of our distinctive features. By changing a person's social milieu so that a different personal characteristic becomes distinctive, the theory suggests that the person's self-concept can be changed in a predictable way.

In one test of distinctiveness theory, McGuire and co-workers (1978) examined the extent to which ethnicity was spontaneously salient in the self-concepts of school children in a moderate-sized, inland, industrial city in Connecticut. They found support for the distinctiveness prediction that in this ethnically mixed setting (white: 82 per cent; black: 9 per cent; Hispanic: 8 per cent; the 1 per cent who

were of uncertain ethnicity were excluded from the analysis), members of the minority group would be more conscious of their ethnicity. They found that only 1 per cent of whites mentioned their ethnicity in response to the question: 'Tell us about your self.' By contrast, 17 per cent of the black and 14 per cent of the Hispanic minority members spontaneously mentioned their ethnicity.

Although these results were consistent with predictions, the composition of the sample precluded a rigorous test of the distinctiveness hypothesis because the study failed to 'counterbalance which ethnic group was in the majority (a counterbalancing made difficult by the predominantly white... demographic makeup of the United States population)' (McGuire et al., 1978: p. 515). Hence, the alternative explanation that 'blacks (perhaps because of the black consciousness movement) and Hispanics are intrinsically more conscious of their ethnicity whether or not they are in the [numeric] minority' could not be ruled out (McGuire et al., 1978: p. 515).

A more recent study (Mehra et al., 1998) sought to extend the work of McGuire and his co-workers to the study of social identification and friendship in organizations. The study found that members of numerically underrepresented groups, relative to members of the majority group, exhibited a stronger tendency not only to identify with but also to form friendships with members of their own group. But, as in the earlier empirical work on distinctiveness theory, the relative proportion of whites and racial minorities in their study approximated that in the broader society, making it impossible to discern whether the observed pattern of social identity and friendship was in fact situational or, instead, chronic.

In this study, we examined the distinctiveness hypothesis in a non-hierarchical, voluntary organization consisting of members of two minority ethnic groups (African Americans and Hispanics) that were present, when the data were collected, in roughly equal proportions in the broader population (12 per cent), but were unequally represented within the organization we examined (African Americans: 83 per cent; Hispanics: 17 per cent). Based on the logic of distinctiveness theory, we predicted that:

Hypothesis 1: Relative to members of the majority ethnic group (African Americans), minority ethnic group members (Hispanics) will be more likely to identify within-group.

Hypothesis 2: Relative to members of the majority ethnic group (African Americans), minority ethnic group members (Hispanics) will be more likely to select friends from within their own group.

We did not make parallel hypotheses for gender because men and women were present in roughly equal proportions in our sample (men: 45 per cent; women: 55 per cent). We expected on the basis of distinctiveness theory, that there would be no significant differences between men and women in the preference for same-sex others.

Distinctiveness and network marginality

The logic of distinctiveness can be extended to make predictions about the relative positions that minority and majority group members will come to occupy in the emergent friendship network within the overall organization.

Distinctiveness theory argues that members of the minority group (relative to majority group members) will display an emphasized tendency to select friends from their own distinctive group rather than from the network as a whole. Developing and maintaining friendships take time and energy, both of which are finite and limited. When people choose certain individuals as friends, they essentially forego possible friendships with other individuals. If members of the group in the numeric minority

tend overwhelmingly to select friends from within their own group, then, given limitations of time and energy, they are unlikely to have many connections to members outside their group. Even in the absence of any exclusionary pressure from the majority group, minority group members will tend to have comparatively fewer direct and indirect connections to the more numerous majority group members—in the language of social network analysis, they will come to occupy the margins of the friendship network (see Ibarra, 1993).

Although a previous study reported results that supported this line of reasoning, it was unable to rule out the possibility that the minority group was on the margins of the friendship network because of exclusionary pressures and biases stemming from the lower social-status of the minority group (Mehra et al., 1998: p. 443). In this study, we test this hypothesis using two ethnic groups (Hispanics and African Americans) that were relatively matched in social status (see, for example, Major et al., 2002: p. 272), thereby providing a more direct test of the logic linking numeric distinctiveness with network marginality.

Hypothesis 3: Members of the minority ethnic group (Hispanics), relative to members of the majority group (African Americans), will occupy the margins of the friendship network.

Methods

Setting

We tested our hypotheses in an organization composed of two different ethnic groups—African Americans and Hispanics—both of which, relative to whites, are ascribed a relatively low status in U.S. society (see Major et al., 2002: p. 272, for recent evidence). Furthermore, U.S. census figures showed that these two ethnic groups were present, at the time of data collection, in roughly equal proportions within the broader American population (African Americans: 12.3 per cent; Hispanics: 12.5 per cent); but they were unequally represented within the organization that we examined (African Americans: 83 per cent; Hispanics: 17 per cent). Because the two ethnic groups that made up our sample were balanced in terms of both social status and numerical composition in the broader society, we were able to control for two highly plausible alternative explanations that prior tests of distinctiveness theory have been unable to rule out.

Our study focused on the student-members of the Management Doctoral Student Association (MDSA), which was created by The PhD Project. Founded in 1994, The PhD Project, a non-profit organization, defined its mission as increasing the ethnic diversity of business school faculty. A key element of The PhD Project's approach to accomplishing this long-term goal was the development of mechanisms to enable minority doctoral students to form informal social ties with one another. Because of the rich expressive and instrumental support such ties provide (e.g., Friedman, 1996), they play an important role in helping doctoral candidates complete their degrees and launch successful careers as business professors (e.g., cf. Collins, 1998; Gersick, Bartunek, & Dutton, 2000).

To facilitate the formation of network ties among peers, MDSA, under the auspices of The PhD Project, organized informational sessions and informal social gatherings for student-members at the annual meetings of the Academy of Management. These meetings were actively promoted by The PhD Project as 'networking' opportunities. The PhD Project covered the costs of attendance at the meetings for student members, all of whom were either citizens or permanent residents of the United States. It also maintained a website that served as a clearing house of information related to the organization and

its activities (e.g., conference schedules, tips for surviving the doctoral program, position announcements.)

Another aspect of the MDSA that made it a particularly good site for testing our hypotheses was its relatively non-hierarchical and informal structure. Unlike more traditional work organizations, the student members of the MDSA could make friendship and identity choices unencumbered by the constraints of formal hierarchy.

Sample

We used a mail-survey to gather data on the main variables in our study. Of the 151 people whose names were in the list provided to us by The PhD Project, we received usable responses from 108, a response rate of 72 per cent. We dropped the five Native Americans who responded to the questionnaire from the final analysis for two reasons. First, relative to African Americans and Hispanics, Native Americans were grossly underrepresented in the overall American population. Our test of distinctiveness theory sought to compare ethnic groups that were matched in terms of representation in society at large. Second, the number of Native Americans was small for reliable statistical analysis. Still, we ran all analyses with and without the five Native Americans, the pattern of results did not change. The final sample used in the analysis reported here consisted of 86 African Americans and 17 Hispanic Americans. The sample was (roughly) balanced with regard to sex (56 women; 47 men).

Measures

The identity network

To maintain comparability with prior work, we used the same approach to capture social identity as Mehra et al. (1998). As they noted: 'the social component of identity is the perception of "oneness" with others (Ashforth & Mael, 1989: p. 21). These perceptions of the social self are necessarily "relational and comparative" (Tajfel & Turner, 1985: p. 16).' Social identity was measured by asking individuals to look down the list of student-members and place checks next to the names of those people they considered 'especially similar' to themselves.

The friendship network

We measured friendship by asking respondents to look down an alphabetical list of student-members and place checks next to the names of people they considered their 'personal friends.' Respondents were free to nominate as many network contacts as they thought appropriate. This 'roster' method for eliciting data on friendship ties is preferable to a 'fixed-choice' design in which respondents are asked, for example, 'List your five best friends,' because it is unlikely that all people have exactly five friends. Moreover, limiting respondents to a fixed number of choices tends to introduce measurement error into network data (Holland & Leinhardt, 1973).

Homophily

We calculated homophily for the friendship network and for the identity network using the formula described in Krackhardt (1990):

$$\frac{(ad) - (bc)}{[(a + c)(b + d)(a + b)(c + d)]^{1/2}}$$

where 'a' is the number of ties a person sent to people of one's own group; 'b' is the number of ties a person sent to people of the other group; 'c' is the number of people of one's own group an individual could have cited but did not; 'd' is the number of people of the other group an individual could have cited but did not. This index controls for the relative availability of different groups (cf. Ibarra, 1992: p. 424). For each individual, the homophily index can range from -1 (indicative of extreme 'heterophily') to 1 (indicative of extreme homophily).

Network marginality

Following earlier work (e.g., Mehra et al., 1998; Mehra, Dixon, Brass, & Robertson, 2006), we computed this measure using the eigenvector routine in the program UCINET (Borgatti, Everett, & Freeman, 2002).¹ Because the eigenvector routine computes centrality as the summed connections to others weighted by the centrality of those others (Bonacich, 1972), it captures both direct and indirect friendship ties. Network marginality was defined as the converse of centrality: those with lower eigenvector scores scored high on marginality. Individuals located at the margins of the network lack direct and indirect connections to well-connected individuals located at the center of the network.

We symmetrized the friendship matrix using the rule that if either member of a pair nominated the other, then the pair was a friendship pair. As a check, we also symmetrized this variable using the alternative symmetrization rule that a pair is a friendship pair only if both parties nominate the other as a friend: The pattern of results was unchanged.

Race

On the basis of self-report, we coded this variable as 1 for African Americans and as 0 for Hispanics.

Control variables

Tenure

This self-reported variable was coded as the number of years the individual had been a member of the organization.

Sex

This was coded 1 for women and 0 for men.

We also considered academic concentration/major, age, marital status, and whether or not the person was born in the U.S.A. as potential control variables. Inclusion of these non-significant variables did not change our results; but their inclusion did reduce our sample size and produced poorer fitting models. We therefore dropped these variables from further consideration.

Analyses and Results

The mean homophily values presented in Table 1 show that, controlling for availability, individuals tended to identify with ($x = 0.07$, s.d. = 0.15) and form friendships with ($x = 0.09$, s.d. = 0.18) others of the same race.

¹The eigenvector measure, which is based on Bonacich (1972), is computed as follows: 'Given an adjacency matrix \mathbf{A} , the centrality of the vertex i (denoted c_i) is given by: $c_i = \alpha \sum \mathbf{A}_{ij} c_j$ where α is a parameter. The centrality of each vertex is therefore determined by the centrality of the vertices it is connected to. The normalized eigenvector score is the scaled eigenvector centrality divided by the maximum difference possible expressed as a percentage. For a given network with vertices $v_1 \dots v_n$ and maximum eigenvector centrality c_{\max} the [normalized eigenvector measure] is $\sum (c_{\max} - c_{v_i})$ divided by the maximum value possible, where (c_{v_i}) is the eigenvector centrality of vertex v_i ' (Borgatti Everett, & Freeman, 1992: p. 86).

Table 1. Means, standard deviations, and correlations

| Variables | Mean | s.d. | <i>n</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------------------------------|-------|------|----------|--------|------|---------|------|--------|-----|--------|
| 1. Tenure ^a | 3.29 | 1.44 | 84 | | | | | | | |
| 2. Sex ^b | .54 | .50 | 103 | -.05 | | | | | | |
| 3. Race ^c | .83 | .37 | 103 | -.09 | .12 | | | | | |
| 4. Friendship network centrality | 10.56 | 8.79 | 103 | .43*** | -.05 | -.13 | | | | |
| Race homophily | | | | | | | | | | |
| 5. Friendship network | .09 | .18 | 103 | .13 | -.18 | -.67*** | .15 | | | |
| 6. Identity network | .07 | .15 | 103 | .10 | -.17 | -.63*** | .23* | .78*** | | |
| Sex homophily | | | | | | | | | | |
| 7. Friendship network | .04 | .10 | 103 | .08 | .14 | -.01 | .06 | .15 | .09 | |
| 8. Identity network | .04 | .09 | 103 | -.05 | .00 | -.07 | .12 | .18 | .17 | .40*** |

Note: * $p < .05$; *** $p < .001$ (all tests are two-tailed).

^aTenure is in years.

^b0 = Men; 1 = Women.

^c0 = Hispanic American; 1 = African American.

Our first hypothesis predicted that, relative to the majority African Americans in our sample, the minority Hispanics would be more likely to identify with members of their own ethnic group. The results presented in the top half of Table 2 support this hypothesis: The availability adjusted homophily index for race was significantly higher ($t = 8.12$, $p < .001$) for Hispanics ($x = 0.29$) than it was for African Americans ($x = 0.03$).

We obtained parallel results for the friendship network, as predicted by our second hypothesis. The results presented in the bottom half of Table 2 indicate that Hispanics ($x = 0.37$) were significantly more likely ($t = 9.09$, $p < .001$) than African Americans ($x = 0.04$) to select friends from within their own ethnic group.

Recall that we expected, on the basis of distinctiveness theory, no significant differences between men and women in the preference for same-sex others because men and women were represented in roughly equal proportions in our sample (women: 54 per cent; men: 46 per cent). The results shown in Table 2 confirm these expectations: t -tests comparing sex-based homophily in both the identity and friendship networks were insignificant.

Table 2. Mean homophily values showing tendency to choose partners similar to self

| | African Americans ($n = 86$) | Hispanics ($n = 17$) | t | Men ($n = 47$) | Women ($n = 56$) | t |
|--------------------|--------------------------------|------------------------|---------|------------------------|--------------------|-------|
| Identity network | | | | | | |
| Type of homophily | | | | | | |
| Race | .03 (.68) | .29 ^a (.50) | 8.12*** | .10 ^b (.62) | .05 (.68) | 1.71 |
| Sex | .04 (.50) | .06 ^a (.47) | 0.66 | .04 ^b (.44) | .04 (.54) | -0.01 |
| Friendship network | | | | | | |
| Type of homophily | | | | | | |
| Race | .04 (.81) | .37 ^c (.38) | 9.09*** | .13 ^d (.66) | .06 (.80) | -1.87 |
| Sex | .04 (.56) | .04 ^c (.47) | 0.11 | .03 ^d (.45) | .05 (.62) | -1.39 |

Note: Values in parentheses are unadjusted homophily scores. Homophily scores for a given network that appear in the same column and share the same superscript are significant at a minimum of $p < .05$ (using paired-sample t -tests). All tests are two-tailed.

Note: *** $p < .001$.

Table 3. Summary of regression analyses predicting homophily^a

| | Type of homophily | |
|-----------------------|---------------------------|------------|
| | Race | Sex |
| Identity network | | |
| Tenure ^b | .00 (.01) | -.00 (.01) |
| Sex ^c | -.04 (.03) | .02 (.02) |
| Race ^d | -.26 (.04) ^{***} | -.01 (.03) |
| Model <i>F</i> | 19.27 ^{***} | 0.46 |
| <i>R</i> ² | .42 | .02 |
| Friendship network | | |
| Tenure | .01 (.01) | .01 (.01) |
| Sex | -.06 (.03) | .02 (.02) |
| Race | -.34 (.04) ^{***} | -.00 (.03) |
| Model <i>F</i> | 27.70 ^{***} | 0.48 |
| <i>R</i> ² | .51 | .02 |

Note: *** $p < .001$.

^aValues in table are unstandardized coefficients; standard errors are in parentheses.

^bTenure is in years.

^c0 = Men; 1 = Women.

^d0 = Hispanic American; 1 = African American.

Table 3 shows that the univariate results presented in Table 2 remained significant after control variables were included in the regression models. The results shown in the first column of Table 3 indicate that the tendency to identify with and make friends with same-race others was stronger among Hispanics than among African Americans, with individuals sex and tenure in the organization controlled for. (As expected, there were no differences between men and women in the tendency to identify with and make friends with others of the same-sex.) These results show strong support for our first two hypotheses, which argued that, relative to members of the majority ethnic group, members of the minority ethnic group will be more likely to identify and select friendships from within their own group.

Could it be that the Hispanics in our sample tended, relative to the African Americans, to be more likely to identify and form friendships within group because they were more likely to be enrolled at universities that were geographically proximate? According to this alternative explanation, the reason for the relatively higher homophily among Hispanics may have more to do with the opportunities and incentives for interaction that come from co-location than from numeric distinctiveness within specific organizational contexts. To rule out this possibility, we first identified the university where each respondent was enrolled as a doctoral candidate. We found that the 17 Hispanics in our sample were spread out over 15 different universities within the United States. Next, we used the official U.S. Census system, which divides the U.S. into nine separate geographic 'divisions,' to code the geographic region of the country in which each university was located (for details, see: http://www.census.gov/geo/www/us_regdiv.pdf). Inclusion of this categorical variable in our analysis did not change the pattern of results: in particular, the variable 'race' remained a highly significant ($p < .001$) predictor of homophily in both the identity and the friendship network. These results suggest, in support of hypotheses 1 and 2, that it was numeric distinctiveness, not geographic proximity, that was responsible for the significantly greater homophily among the Hispanics.

Our third hypothesis predicted that the Hispanics, who were in the numeric minority in this organization, would, relative to the majority African Americans, tend to be located at the margins of the

Table 4. Summary of OLS regression predicting centrality in the friendship network^a

| Variable | Full sample | African Americans | Hispanics |
|-----------------------|----------------------------|---------------------------|----------------------------|
| Tenure ^b | 2.61 (0.63) ^{***} | 2.29 (0.80) ^{**} | 3.42 (0.54) ^{***} |
| Sex ^c | -0.07 (1.85) | 0.42 (2.19) | -2.40 (2.17) |
| Race ^d | -1.72 (3.19) | | |
| Race homophily | 0.80 (6.56) | 0.21 (4.38) | -1.98 (3.78) |
| Model <i>F</i> | 4.70 ^{**} | 2.76 [*] | 15.75 ^{***} |
| <i>R</i> ² | .19 | .12 | .80 |

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

^aValues represent unstandardized coefficients; standard errors are in parentheses.

^bTenure is in years.

^c0 = Men; 1 = Women.

^d0 = Hispanic American; 1 = African American.

informal friendship network. The results in the first column of Table 4 show that this hypothesis was not supported: Race was not significantly related to centrality/marginality in the friendship network. Further, sub-sample analyses presented in the second two columns of Table 4 indicate that the preference for selecting same-race others as friends was not significantly related to network centrality for African Americans or Hispanics. The only variable that was a significant predictor of centrality in the friendship network was tenure ($p < .001$). Longer tenured organizational members, irrespective of race, were located in more central positions in the friendship network.

We conducted supplementary analysis to check these results by using multidimensional scaling on the unsymmetrized friendship matrix to create a visual representation of the friendship network (Borgatti, 2002). The use of visual representations of network data has a long history in social network analysis; indeed, one recent review of the field identified the use of visual representation of network data as one of four core elements at the heart of the social network paradigm (Freeman, 2004: p. 3). Figure 1 reveals that, with a few exceptions, the Hispanics were clustered tightly together (i.e., most of the triangular nodes in the figure, which represent the Hispanics, are located close to each other; they are densely interconnected by friendship ties), a finding that is consistent with hypothesis 2. However, the triangular nodes are not on the margins of the overall friendship network (i.e., they are not exclusively on the periphery of the network diagram in Figure 1). This finding further confirms the lack of support for hypothesis 3 (cf. Figure 1 in Mehra et al., 1998). Figure 1 also shows that five African Americans were structurally isolated; they shared no friendship ties with members of either ethnic group within the organization. We checked to confirm that the regression results for network marginality reported in Table 4 were not an artifact of these outliers. Race was unrelated to network marginality in the friendship network irrespective of whether or not the five isolates were included in the analysis.

Discussion

Prior tests have found support for distinctiveness theory, but they have been unable to rule out the possibility that it was chronic differences in social status and numeric representation in society at large (rather than numeric distinctiveness within the specific context that was examined) that explained the observed patterns of social identity and friendship. In this field-based study, we examined an organization whose social composition effectively controlled for these potential confounds. We found that members of the smaller ethnic group tended to identify and form friendships within group, as

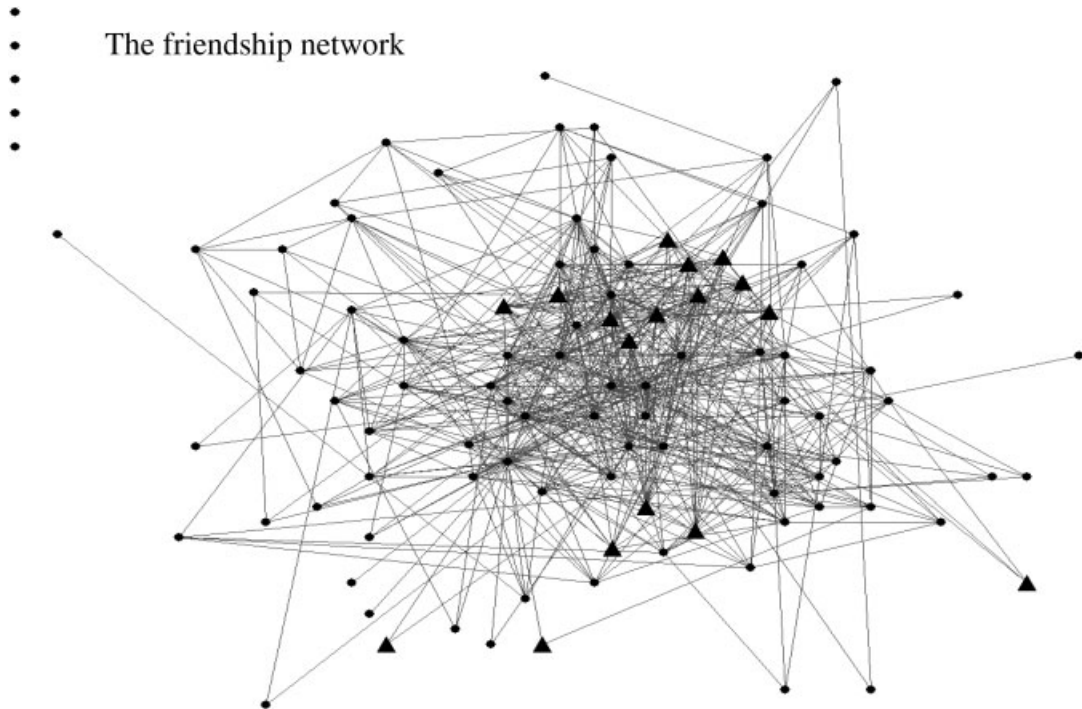


Figure 1. Each node represents a person; each line represents a friendship relation. African Americans are represented by circles, Hispanics by triangles. Structural isolates are shown at top-left. The sociogram was drawn using the Netdraw (1.0) feature in UCINET 6.29 (Borgatti et al., 2002)

predicted by distinctiveness theory. However, in contrast to previous findings, members of the smaller ethnic group were equally well connected to the center of the friendship network as the members of the larger ethnic group. Our results, therefore, support but qualify the explanation that distinctiveness theory has offered for how diversity within an organization can influence the emergent patterns of social identity and friendship among its members.

Distinctiveness, social identity, and friendship

We found strong support for the distinctiveness argument that, in ethnically diverse settings, the members of the smaller ethnic group are more likely to identify and form friendships within group (relative to members of the larger ethnic group). Moreover, because the two ethnic groups in our sample were present in equal proportions in the broader society, but were unequally represented in our sample, our study provides rare support for the distinctiveness argument that patterns of identity and friendship are not fixed across social settings (as argued, for example, in the influential literature on shared cultural values as a source of differentiation between groups—for a recent review of this vast literature, see Tsui, Nifadkar, & Ou, 2007). Rather, they appear to be contingent upon numeric distinctiveness in specific organizational contexts.

It could be argued that Hispanics tend to be more homophilous (i.e., they are more likely to identify and form friendships within-group) than African Americans irrespective of the social composition of

specific settings. Although we cannot completely rule out this possibility, there are reasons to discount the argument: The separate literatures on African American relationships and Hispanic relationships have described these groups as collectivist (e.g., Chatters, Taylor, & Jayakody, 1994; Delgado, 1980; see also the empirical evidence presented in Gaines et al., 1997: p. 1467). The few empirical studies that have compared the relative social identification of African Americans and Hispanics have either found no significant differences between the two groups in their tendency to identify with members of their own group (e.g., McGuire et al., 1978: p. 515), or they have found that African Americans were more likely to identify with their ethnicity than Hispanics (e.g., Ting-Toomey, Yee-Jung, Shapiro, Garcia, Wright, Oetzel, 2000: p. 67). Moreover, the homophily scores for the majority African Americans in our sample (mean for friendship network = .04; mean for identity network = .03) were very similar (mean for friendship network = .02; mean for identity network = .02) to those of the majority whites in Mehra et al. (1998), a pattern of results that is consistent with our contention that the preference for same-race others is driven by numeric distinctiveness in specific social contexts.

Although we did not directly focus on sex differences in this study, it is instructive to compare our results to those reported in two other articles. A study of social networks in a New England advertising and public relations agency—where, as in our sample, women ($N = 45$) outnumbered men ($N = 34$) by a small margin—found no significant differences between men and women in the preference for same-sex friends (Ibarra, 1992). By contrast, in an organization where men ($N = 105$) substantially outnumbered women ($N = 54$), women were significantly more likely than men to identify and form friendships with same-sex others (Mehra et al., 1998). The pattern of results across these studies is consistent with a distinctiveness approach to social identity and social networks in organizations.

Distinctiveness and network marginality

Previous work (Mehra et al., 1998) on distinctiveness theory has suggested that the numerically rarer ethnic group will tend to be on the margins of the friendship network (i.e., members of the numerically rarer group will tend to lack access to the well-connected individuals at the center of the friendship network). In contrast to these earlier results, the numerically rarer ethnic group in the organization we examined was no less central than the majority ethnic group. What explains this discrepancy? Recall that the network marginality of the minority ethnic group in Mehra et al. (1998) was overdetermined in the sense that it was due both to heightened preference for same-race friends among the numerically rarer group and exclusionary pressures, which stemmed, presumably, from the lower social status of the minority group. The two ethnic groups we examined, by contrast, were relatively matched in terms of social status in society (see Major et al., 2002: p. 272). Moreover, The PhD Project actively promoted a climate that flattened race-based status distinctions among its members. In the absence of status differences, minority ethnic group members were apparently able to access the benefits of extensive links with same-race others without sacrificing centrality in the overall friendship network. Fairhurst and Snavely (1983) reported a similar pattern of results for male tokens in two midwestern nursing schools. Although men constituted a distinct numeric minority (41 males, 281 females), they were no less central than women in social networks. That study, however, was unable to distinguish the effects of relative social status from those of numeric underrepresentation, as the authors of that study acknowledged (see p. 359).

The findings of our study qualify the direct link that previous work has drawn between numeric distinctiveness and network marginality (Mehra et al., 1998). The results of our study suggest that

numeric rarity of a group alone may be insufficient to relegate the group to the margins of informal networks (cf. Yoder, 1991: p. 81).

Future research

We would like to encourage several lines of future inquiry into distinctiveness theory. A top priority should be the identification of the precise numerical ratios associated with distinctiveness effects. Recall that the relative proportions of majority and minority ethnic group members in our sample (majority: 83 per cent; minority: 17 per cent) was roughly equal to that reported in Mehra et al. (1998) (majority: 87 per cent; minority: 13 per cent). Future research using different percentages of majority and minority group members is needed to identify the exact tipping points at which groups lose the distinctiveness that enhances the preference for similar others (cf. Kanter, 1977b: p. 987). To the extent that organizations with the necessary composition are difficult to locate in natural settings, we call on researchers to experiment with creating them in the laboratory (cf. Swieringa & Weick, 1982: p. 84). Another possibility would be to explore tipping points using mathematical simulations (cf. Harrison & Carroll, 2006).

We also call for work to help establish the scope of distinctiveness theory. Our focus in this study was on ethnicity. We focused on this attribute because its implications for identity and friendship are an increasingly important topic in our multi-racial society. However, the scope of distinctiveness theory is arguably broader, encompassing differences in characteristics such as age, religion, nationality, physical appearance, or even psychological disposition. Future studies should examine the consequences of distinctiveness for a fuller range of individual characteristics. This work is needed to better establish the generality of distinctiveness theory (for initial work along this line, see McGuire & Padawer-Singer, 1976).

Our study has emphasized numerical distinctiveness as a determinant of perceptual salience. While consistent with past empirical work, there are obviously many other possible determinants of salience other than numerical rarity, such as social desirability, and personal needs and motivations (see McGuire & Padawer-Singer, 1976, for a list of six such determinants). Research on these alternative determinants of perceptual salience is needed if we are to acquire a better understanding of the boundary conditions of distinctiveness theory.

Our approach to identity and interaction in this investigation has emphasized similarity with others as a basis of social identification. However, social identity may depend not just on who we consider ourselves especially similar to but also on whom we consider ourselves especially different from. This recognition of dissimilarity as an important aspect of identity can be seen in some of the earliest work on distinctiveness theory, where it was examined under the rubric of the 'negation self-concept' (e.g., McGuire, 1984), which sought to capture 'who one is not.' We have shown that numeric distinctiveness influences whom people think of as similar to themselves. A task for future research is to examine the consequences of numeric distinctiveness for who people think of as *dissimilar* to themselves. Although similarity and dissimilarity are conceptually related, it may be that numeric distinctiveness has a more powerful influence on one relative to the other. Similarly, it may be that numeric distinctiveness is related not only to one's choice of friends, but also to one's choice of enemies (for a discussion of negative ties and their potent effect on a range of outcomes in organizations, see Labianca & Brass, 2006).

Implications for practice

Distinctiveness theory has insights to offer policy makers and managers, some of them counterintuitive. Consider the longstanding debate in the United States over ethnic diversity in schools and colleges. In

the landmark 1954 case, 'Brown vs. Board of Education,' the U.S. Supreme court ruled that state statutes segregating students by race were unconstitutional and asked all schools to remove policies that discriminated on the basis of race. Since that time, the rationale for diversity in our organizations has gradually shifted away from a calculus that sought to rectify past injustices and discrimination to one that focuses on the presumed collective benefits of diversity. The presence of racial diversity on campus, for example, is now seen as desirable because it facilitates learning, for minority and majority group members, through inter-group exposure and interaction (see the discussion in Rothman, Lipset, & Nevitte, 2003). Indeed, this argument was found sufficiently compelling by the U.S. Supreme Court in June 2003, for it to rule, in a five to four decision, that the University of Michigan Law School could legally consider an applicant's race, as one of several factors, in making admission decisions (see the discussion in Kane, 2003).²

But does increasing ethnic diversity on campuses enhance cross-group identification and friendship thereby enhancing the learning experience for all? Although still far from conclusive, the existing evidence seems to suggest that growing ethnic diversity may in fact be related to a *decline* in cross-race relations and a *reduction* in the perceived quality of education on college campuses (see Rothman et al., 2003). These seemingly counterintuitive results are consistent with distinctiveness theory. As organizations become more diverse with regard to ethnicity, the salience of ethnicity as a basis for identification and friendship is likely to increase, not decrease (cf. McGuire et al. (1978): p. 512).

We believe that distinctiveness theory could be used to help managers and policy makers better anticipate and shape the patterns of identity and social interaction that are likely to emerge in ethnically diverse settings. Increasing the ethnic diversity of a group, from the perspective of distinctiveness theory, can lead to segregated patterns of identification and friendship, at least until some tipping point is reached. There is a rich literature both in social psychology and in social network analysis that suggests practical steps that managers can take to shape emergent patterns of identification (e.g., Sherif, Harvey, White, Hood, & Sherif, 1954/1961) and friendship (e.g., Krackhardt & Hanson, 1993). The PhD Project, for example, was very active in promoting status equality (especially with regard to race—the mission of the organization was to increase the number of management professors of color) among its members, which may explain why the Hispanics in our sample were able to remain well connected in the overall friendship network despite their small numbers and the emphasized tendency this created to identify with and select friends from within their own group. Managers can also attempt to create bridges between members of the numerically rarer group and well-connected organizational members from the majority group to help ensure that the members of the numerically rarer group retain access to the centrally located individuals.

Policy makers in charge of managing ethnic diversity on campus can use distinctiveness theory to anticipate, understand, and explain to majority group members why members of underrepresented groups seem so often to retreat into self-imposed isolation (for one example of this phenomenon, see Denby, 1997). As our results showed, the pressure toward within-group identification and friendship tends to be stronger among members of the underrepresented group than among members of the majority group. Recognition of the heightened pressures for within-group identification and interaction among underrepresented group members may be an important precondition for achieving integration in organizations.

²On 27 June 2007, the U.S. Supreme Court struck down two public school plans that used race as a factor in deciding which school a student would attend. The 5-4 majority opinion was explicit that it did *not* reverse the court's 2003 decision, which upheld the rights of colleges and universities to use race as one of several factors in achieving a more diverse student body. This, according to Justice Roberts, is because 'there are considerations unique to institutions of higher education' that require that race be taken into account as part of a more 'holistic review' of a university applicant's qualifications (National Public Radio, 2007).

Conclusion

Everett Hughes once observed that organizational settings are natural laboratories for studying patterns of interpersonal relationships between members of different ethnic groups (Hughes, 1963: p. 879). Organizational researchers can capitalize on this insight by developing and testing theoretical accounts of how diversity influences interpersonal dynamics in organizational settings. In addition, researchers can investigate unusual organizations—like the MDSA—that were designed as bold reforms intended to combat specific social problems (cf. Campbell, 1979). By using organizations as laboratories for generating and testing theories, we can not only address questions of fundamental importance to social science but also become a more influential voice in the ongoing public debate over diversity.

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Author biographies

Ana Sierra Leonard is an Assistant Professor of Organizational Behavior in the College of Business at the University of Cincinnati. Her research (funded by the KPMG foundation) is focused on issues that integrate three topics: informal social networks, personality, and the cultural differences between ethnic groups. She has previously managed information technology projects for several Fortune 100 companies.

Ajay Mehra is an Associate Professor in the Gatton College of Business and Economics at the University of Kentucky. Current projects include a network simulation that focuses on the system-level performance consequences of altruistic behavior, and a longitudinal study of co-authorship and citation networks in organizational studies. He received his Ph.D. in 1998 from Penn State's Smeal College of Business. In addition to his research and teaching, he is passionate about dogs, chess, and rock-climbing.

Ralph Katerberg is an Associate Professor of Organizational Behavior in the College of Business Administration at the University of Cincinnati. He previously served as the Associate Dean for Academic Affairs for the College of Business. He has studied and written about leadership, employee turnover, employee motivation, and job attitudes. He has also served as a consultant to a number of military organizations and business firms.

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