Community Heterogeneity and Political Participation in American Cities*

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Abstract

This paper analyzes the effects of racial diversity on political participation in American cities. In contrast to some recent research on the subject, the paper argues that incentives for participation are greatly reduced by homogeneity. It is argued that heterogeneous places are characterized by more conflict over resources and more mobilized groups, leading to higher levels of political participation. In order to test this argument I use data from the 2000 Social Capital Community Benchmark Survey—a survey of more than 29,000 individuals across the United States. Respondents to the survey were matched with census data on their place of residence, creating a unique dataset which is analyzed using multilevel modeling techniques. The results of this analysis indicate that racial diversity affects the propensity to vote differently for different racial groups and that these differences vary across communities. While white people are less likely to vote the more racially diverse their city of residence is, the relationship is the reverse for minority populations.

1. Introduction

By taking political action, citizens make their preferences known, determine who holds public office and try to influence the decisions made by politicians. Despite popular conceptions of the United States as a vast wasteland of apathetic and apolitical citizens, the reality is that Americans are participants. While it is true that voter turnout is lower in the US than in many other democracies, Americans are generally more likely to contact politicians and officials, work on a campaign, belong to and be active in political groups and participate in local politics than citizens in other countries (Brady, Schlozman, Verba & Elms 2002).

However, the issue of declining political participation has spurred a large literature and much debate not only the United States but also in many other western democracies. Much of the research on political participation and its decline, analyzes changes in the

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characteristics of *individuals* that may account for decreased voter turnout and other forms of activity. While changes in levels of education, income and other individual-level factors are no doubt important and should be analyzed, much of such research suffers from not taking adequate account of political and social context. This study analyzes data from a new large-scale survey and matches respondents with information about their city of residence from various sources in order to examine how the political and social environment in which individuals find themselves in affects their political behaviour.

As Verba, Schlozman & Brady note, democracy requires both a degree of voice and equality (1995, p. 1). However, far from all citizens make their voice known through voting and even fewer take part in other forms of political participation. Those that do participate are not representative of the larger population. As we know, participants differ in fundamental ways from non-participants—education, income, race, gender and a host of other individual-level characteristics set active citizens apart from inactive ones. However, it is not the case that participation is equal between equally rich, well educated, white males for instance. As I show in this paper, even after controlling for many of the characteristics of individuals associated with political participation, activity rates vary between people in different places in the United States. So it is not just a matter of *who* you are, (or even who you are connected to, as social capitalists would have us believe), but also *where* you are. In order to untangle these overlapping sources of influence, I compare political participation across cities in the United States, taking into account not only individual factors but also the social and political context within which individuals operate.

Although cities in the Unites States vary on a large number of dimensions, in this paper I only focus on one: racial diversity. Race is of fundamental importance to American politics and one of the most striking trends in American society in recent years has been the increase in racial diversity. It is no longer accurate to differentiate communities' racial characteristics by the relative size of their black and white populations; increasing immigration from Asia and a rapidly growing Latino population are altering the ethnic make-up of America's cities. Are people living in cities characterized by high degrees of ethnic fractionalization more or less likely to take political action than those living in very homogenous places?

2. The Impact of Diversity on Political Participation

The 2000 US Census makes it more clear than ever that America is a diverse country and growing increasingly so. While issues of race and their influence on political behavior and attitudes have long been studied by scholars of American politics, the focus of most of this research has been on how the race of individuals affects various outcomes. Until recently it has been rare that race as a characteristic of community context or environment has been taken into account (Oliver 2001). Perhaps in response to the realization that diversity is increasing and patters of racial integration changing, there have been a number of new studies on the impact of heterogeneity (eg. Alesina & La Ferrera 2000, Oliver 2001, Oberholzer-Gee & Waldfogel 2001, Mutz 2002). The majority of studies examining heterogeneity and participation argue that increased heterogeneity is detrimental to levels of engagement.[1] The social capital literature from Putnam forward argues that diversity may be a hindrance to social capital and more specifically to civic engagement. Ethnically diverse places tend to have lower levels of social trust—that is, trust in people in general, even those one does not know (Saguaro Seminar 2001). But what is the relationship to between diversity and civic engagement? A number of authors make the claim that civic engagement is higher (or ought to be higher) in areas characterized by homogeneity (Alesina & La Ferrera 2000, Alesina & La Ferrera 2002, Mutz 2002, Costa & Kahn 2003).

[1] Notable exceptions are Oliver (2001) who argues that increasing racial segregation between suburbs is related to decreased political and civic engagement and Campbell (2002) who argues that the relationship between diversity and political participation is curvilinear so that political activity is lower at both extremes of diversity and homogeneity.

The reasoning being that individuals in these areas are a) more able to overcome collective action problems associated with participation and b) more willing to volunteer and engage in a community whose other citizens share their values and beliefs.

This argument has mostly been applied to non-political civic engagement but has even been used by scholars of political participation—which is what is of central concern here. Diana Mutz, for example argues that people exposed to "cross-pressures" in networks characterized by political disagreement (ideological heterogeneity) are less likely to participate than those who exist in more homogenous surroundings where they agree with those around them. The reasoning is that people in the former will be ambivalent in their political views because of the conflicting pressures put on them by others in their network, thus making it less likely that they will take action (Mutz 2002, p. 840). Alesina & La Ferrera (2000) also argue that people in areas in which racial heterogeneity and income inequality are high are less likely to participate as a consequence of group formation being more difficult in such areas.

There are however, a number of difficulties with these arguments. Alesina and La Ferrara lump together very disparate forms of participation in their study. A clear distinction needs to be made between political participation and participation in non-political groups. The motivations for engaging in these will be very different. It may be that civic, that is non-political, engagement is higher in more homogenous areas for the reasons Alesina and La Ferrara cite. However, as we see below, these same reasons may well be good arguments as to why we could expect *political* participation to be lower in such areas. While the social capital literature argues that increased diversity leads to decreased generalized trust and, therefore, less political participation, a strong case can be made that the diminished trust in diverse communities should mean more participation. If one is distrustful of others in one's community, it makes sense to ensure that one's own voice is heard through taking part in politics.

In contrast to this literature, I argue that community heterogeneity—racial heterogeneity in particular—should lead to a higher likelihood of people participating in politics. One potential reason for this is that cities or communities characterized by heterogeneity will tend to have more conflicts over resources and policies and more mobilized groups leading to more political participation. Recent work in group conflict theory shows that racial attitudes and policy preferences are strongly influenced by group identities and the perception that what other groups gain, the own group loses. As Glaser puts it, "In essence, this theory posits that individuals have a zero-sum view of politics, that they think in group terms, in 'us' and 'them' terms, and that they see the possibility that their own group could lose something valued to a rival group" (Glaser 1994, p. 23). In other words, individuals view politics, at least in part, as a competitive struggle between groups for scarce resources and are motivated to attempt "to affect the process and pattern of their distribution" (Bobo 1988, p. 95). Not only is the individual-level race important for the development of these attitudes and related behaviors, but the racial environment is crucial. People living in more racially diverse areas will be inclined to express these kinds of attitudes more than those in less heterogeneous areas (Glaser 2003). Race and racial identity become more salient in more racially heterogeneous places.

3. Data

The convoluted nature of American local government has led to difficulties in studying political participation and these difficulties have been exacerbated by the lack of data on participation in sub-national units. Most of the studies in this field have used data from *nationally* representative samples. When surveys of this kind are used and they include questions about participation in local politics, it is possible to examine in general why some people take action and others do not. For instance, one could draw some conclusions about why home owners might be more likely to participate or why less educated individuals would be less likely to (Rahn & Rudolph 2001, p. 5). However, with a nationally representative sample it is not possible to study the impact of the characteristics

of different communities and why people in different places might behave differently. Because so few respondents are interviewed from any given city or county it is difficult at best to make any comparisons across communities with statistical reliability. There are number of studies looking at individual cities or small-n comparisons (Fuchs, Minnite & Shapiro 2000, Garbaye 2002) but because they sample very few cities, these studies do not allow for a systematic analysis of institutional or environmental variables. One exception to this is the work of Eric Oliver which examines the effects of suburbanization on civic and political participation in a large set of municipalities (1999, 2000, 2001). However, Oliver's work suffers from potential methodological problems discussed in more detail below. There is also a literature in which large-scale cross-country comparisons of political participation are made. However, here we run into other difficulties such as being able to isolate the effects of institutional factors and taking account of cultural differences, for instance.

A recently available source of data on Americans' political activity and attitudes allows us to more systematically study the effects of contextual variables. This study does not suffer from the same limitations as many other sources of data on political participation in American cities. In addition to a nationally representative sample of 3003 respondents, the survey—the Social Capital Community Benchmark Survey—also included interviews with people drawn from 40 different sub-national representative samples. These samples had varying geographical boundaries including states and regions within states (some were at the county level, some at the city level and some at other regional levels determined by the local community foundation funding the project in each area). The total sample size for the combined surveys is 29,733. Through an agreement with the Roper Center I was able to obtain detailed geocodes for the data, enabling me to identify respondents' places of residence. Using these "FIPS" codes (the unique identification code used by the Census Bureau to identify every place in Untied States) respondents were sorted into their city of residence regardless of what sub-sample they belonged to originally, thereby avoiding the sometimes awkward sampling geographies determined by the sponsors. I have then matched respondents to the survey with data about their place of residence from the US Census and US Census of Governments contained in the *County and City Data Book*. This produced a file with census data on the city level for 14,153 of the respondents who lived in 690 identifiable city areas. "City" in this study refers to census-defined areas of populations of 25,000 or more and only those respondents residing in such areas were selected. As such, much of the missing data are a result of not being able to identify a city's FIPS code or the city not being included in the County and City Data Book and only affected a reasonably small number of cases. This form of missing data is relatively random and therefore should not significantly change the results.

There are however, a number of cases at the individual level that have missing data on some items due to non-response. This form of missing data is less random and needs to be addressed in a way other than the common strategy of deleting cases; a strategy that leads to biased results and a loss of power in the analysis due to less information once cases have been discarded (King, Honacher, Joseph & Scheve 2001, p. 49). Instead of deleting cases—either listwise or pairwise—one can impute values for the missing data. Using Joseph Schafer's (1999) multiple imputation software, *NORM* I imputed values for the missing data, creating 10 complete data sets on which subsequent analyzes were carried out.[2]

The dependent variable for this study is electoral political participation. This was measured by asking respondents to the Benchmark survey the following question:

[2]Imputation involves "filling in" missing data with plausible values. When imputing we are making a guess as to the values of the missing data, so the standard errors from any analyzes which use such imputed data will be too small—since they do not include this "guessing". Therefore, one needs to make several imputations. Multiple imputation provides the extra variation needed to account for the uncertainty about the imputed values. This approach involves imputing m values for each missing value, creating m complete data sets on which the analysis is carried out. Estimates from each data set are then combined using methods described by Rubin (1987). In practice, this combining of estimates over the m data sets is done through a command in the HLM software used for analysis in the study.

> As you may know, around half the population does not vote in presidential elections. How about you - did you vote in the presidential election in 1996 when Bill Clinton ran against Bob Dole and Ross Perot, or did you skip that one?

Clearly voting is not the only way Americans make their preferences known and try to influence policy and decision makers. I am working on another version of this paper where non-electoral political participation is analyzed. The Benchmark survey measured these kinds of political action with the following questions:

> Which of the following things have you done in the past twelve months: Have you signed a petition? Attended a political meeting or rally? Participated in any demonstrations, protests, boycotts or marches? Been involved in any public interest groups, political action groups, political clubs, or party committees?

Thus there are five distinct indicators of political participation in the survey: i) voting in the 1996 presidential election; ii) signing petitions; iii) rallying; iv) marching; v) involvement in a political group. What constitutes political participation as opposed to other forms of civic engagement is clearly not cut and dry. As such, there are activities like being an officer in a club or being involved in a community project that are left out which some could argue should be included. However, these kinds of activities need not be political at all. An attempt has been made to limit the dependent variable to those acts through which individuals explicitly try to exert pressure on politicians and decision-makers, try to influence the direction and character of policy and most obviously, have their say in the election of representatives. The five types of political participation differ considerably in many ways and the environmental factors I am interested in may indeed have different effects on different types of political activity; therefore they ought to be modeled separately and compared, however this paper deals only with voting.

While this study argues that contextual variables are highly important in predicting political participation, it is nevertheless the case that many individual-level factors play a role in people's propensity for taking political action and these clearly need to be included in any model of political participation. Individual participants differ from non-participants in several ways. One of the strongest findings in past work on political participation—especially turnout—is that individuals with higher socio-economic status (SES) participate more than those from low SES groups (Verba & Nie 1972, Wolfinger & Rosenstone 1980, Brady, Verba & Schlozman 1995, Conway 2000). Recent work has also focused on race and gender as key variables in explaining differences in political behavior between individuals (Burns, Schlozman & Verba 2001). Therefore, it is important to first outline and specify an individual-level model of political participation before differences across locations can be analyzed.

This study is chiefly concerned with the impact of contextual factors—community effects—on individuals' participation. As noted above, the Benchmark survey with its geo codes enables researchers to match large samples of individuals from a large number of cities to data on their place of residence, making it a particularly rich source of information on such community effects. There are of course many dimensions along which American cities can be differentiated—community heterogeneity is but one of these. Cities in the United States also vary to a great extent when it comes to political institutions, systems of governance and representation, size (in terms of both the number and variety of services provided and the sheer number of governments in a city) as well as how and how much they tax their residents. All of these may affect political participation but here I specifically concentrate my attention on community racial heterogeneity. Community heterogeneity is operationalized using a measure of racial fractionalization for each city in the sample. Following Alesina, Baqir & Easterly (1999), Alesina & La Ferrera (2000) and others, racial fragmentation is measured by a Herfindahl index constructed from the US Census. For a full description of the index and how it is calculated, see the data appendix. I also control for the percent of the population in each community that is African-American.

4. The Multilevel Model

The data I use here are nested, or clustered, in nature. I have data on individuals from the Benchmark survey and these individuals are clustered in cities, on which I also have data; as such observations have not been sampled independently of each other. As Snijders & Bosker (1999) note, dependence can be seen as both a nuisance and as an interesting phenomenon in itself (1999, p. 6-9). The nuisance is that dependence of observations needs to be corrected for in some way in order to avoid drawing incorrect inferences; for example, standard errors will tend to appear smaller than they actually are if dependence is ignored. However, I am also interested in analyzing the effects of different city characteristics on individual behavior. That is, I want to draw inferences on cities as well as individuals, making the clustering of observations of interest. In this paper, the question is whether living in a more ethnically diverse city affects an individual's propensity to take political action.

Past work using data with this kind of multilevel structure have often employed either "dummy variable models" or "interactive models" (Steenbergen & Jones 2002, p. 220). Dummy variable models, by assigning dummy variables for each higher-level unit (i.e. in this case cities), are able to overcome the statistical problems associated with dependence of observations in clustered data (Rahn & Rudolph 2001). However, one is often interested in how various aspects of different higher-level units impact on lower-level units; say how different city characteristics influence individuals' chances of participating in politics. A dummy variable model is inadequate in this respect. As Steenbergen notes, "Dummy variables are only indicators of subgroup differences; they do not explain why the regression regimes for the subgroups are different" (Steenbergen & Jones 2002, p. 220). Past contextual analyzes on political behavior (Huckfeldt 1979, Huckfeldt 1984, Abowitz 1990, Oliver 1999, Oliver 2000, Oliver 2001) have tended to use interactive models where contextual-level independent variables are included alone or in interactions with individual-level variables in order to account for contextual heterogeneity (Rahn & Rudolph 2001). These types of models are not ideal either. As Humphries argues, this approach to modeling multilevel data "implicitly assumes a deterministic relationship between the contextual variable and individual-level parameters" (Humphries 2001, p. 684).

A more appropriate model for clustered data of the kind I have and where one is interested in explaining different sources of contextual heterogeneity is a hierarchical, or multilevel, model. Such a model provides robust standard errors (Raudenbush & Bryk 2002) and, as Rahn and Rudolph note:

> The hierarchical model allows us to model our level-1 dependent variable as a function of level-1 explanatory variables, a level-1 disturbance term, level-2 explanatory variables, and, critically, level-2 disturbance terms. Consequently, we are able to model potential sources of contextual heterogeneity without imposing the questionable assumption that we capture all possible sources of such heterogeneity. By actually estimating level-2 variance components, the hierarchical model overcomes the problems of non-constant variance and clustering (2001, p. 32).

The hierarchical model begins with a level-1 structural model.[3] This model can be expressed as follows:

$$y_{ij} = \beta_{0j} + \beta_{1j}x_{1ij} + \epsilon_{ij} \tag{1}$$

Where y_{ij} is the individual-level dependent variable for an individual i (=1,. . . ,N_j) nested in level-2 unit (in this case city) j (=1,. . . ,J). The term x_{1ij} is the individual-level variable and ϵ_{ij} is the individual-level disturbance term. The model is in all respects the same as the traditional regression model except for the important difference that the parameters

[3]The development and notation of the multilevel model presented here draws heavily from the excellent discussions in Raudenbush & Bryk (2002, pp. 16-30) and Steenbergen & Jones (2002, pp. 221-3).

are not fixed. That is, they vary across level-2 units as indicated by the j–subscripts on the β_{0j} and β_{1j} parameters. This addition is crucial and makes possible the testing of certain hypotheses that would be difficult or impossible otherwise. At level-2 (the city-level), I model the individual-level regression parameters as functions of city-level predictors:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} z_{1j} + \delta_{0j} \tag{2}$$

and

$$\beta_{1j} = \gamma_{10} + \gamma_{11} z_j + \delta_{1j}. \tag{3}$$

Equations 3 and 4 together make up the level-2 model where the γ-parameters are the fixed level-2 parameters and the δ-parameters are disturbance terms. Specifying these level-2 disturbances means we are able to avoid the unreasonable assumption we are forced to make with simple regression models, namely that the city-level parameters perfectly account for the variation in individual-level parameters.

The full model is achieved by substituting the expressions for β_{0j} and β_{1j} in (2) and (3) into (1):

$$\begin{aligned} y_{ij} &= (\gamma_{00} + \gamma_{01} z_j + \delta_{0j}) + (\gamma_{10} + \gamma_{11} z_j + \delta_{1j} x_{ij}) + \epsilon_{ij} \\ &= \gamma_{00} + \gamma_{01} z_j + \gamma_{10} x_{ij} + \gamma_{11} z_j x_{ij} + \delta_{0j} + \delta_{1j} x_{ij} + \epsilon_{ij}, \end{aligned} \tag{4}$$

where γ_{00} is the intercept, γ_{01} denotes the effect of the level-2 (city) variable, γ_{10} is the effect of the individual-level predictor and γ_{11} is the effect of the cross-level interaction between the individual-level and city-level predictors with disturbance terms represented by δ_{0j}, δ_{1j} and ϵ_{ij} . In what follows I estimate three models: a "null" model with no predictors at either individual-level or city-level; a conditional model with fixed and randomly varying individual-level predictors; and a "full" model with both individual-level and city-level predictors. The models presented here were estimated using the multilevel software (Hierarchical Linear Models for Windows, version 5.45q) developed by Raudenbush, Bryk, Cheong & Congdon (2003) which produces "empirical Bayes estimates of the randomly-varying level-1 (individual-level) parameters, generalized least squares estimates of the level-2 (city-level) coefficients; and maximum likelihood estimates of the variance-covariance components" (Raudenbush, Bryk, Cheong & Congdon 2002, p. 4).[4]

5. Results and Discussion

Before estimating the conditional model, it is appropriate to begin by asking whether there in fact exists significant variation on the dependent variable across the contextual units—cities. To gauge the magnitude of variation between cities in political participation it is useful to begin by estimating an unconditional, or so-called null model; that is, a model with no predictors at either level. The individual-level model is thus simply

$$turnout_{ij} = \beta_{0j} \tag{5}$$

and the city-level model is

$$\beta_{0j} = \gamma_{00} + \delta_{0j}, \qquad \delta_{0j} \sim N(0, \tau_{00}). \tag{6}$$

Here γ_{00} is the average log-odds of political participation across US cities, while τ_{00} is the variance between cities in city-average log-odds of political participation. The estimated results are $\hat{\gamma_{00}}$=0.795 (se=0.036), $\hat{\tau_{00}}$=0.174 (se=0.039). Thus, for a city with a typical voting rate, that is, for a city with a random effect δ_{0j}=0, the expected log-odds of voting is 0.795, corresponding to an odds of exp(0.795)=2.214. This corresponds to a probability of 1/(1+exp(-0.795)=.688.

[4] See Raudenbush & Bryk (2002) for details on estimating the various coefficients.

Table 1: Individual-level effects on voting[a]

Variable:	Estimate
Intercept	1.230
	(0.035)***
Race[b]	
Black	-0.121
	(0.070)*
Asian	-2.031
	(0.121)***
Hispanic	-1.370
	(0.070)***
Income[c]	
$20K	-0.602
	(0.062)***
$20-29,000	-0.609
	(0.071)***
$30-49,999	-0.326
	(0.062)***
$50-74,999	-0.092
	(0.057)
$75-99,999	-0.112
	(0.070)
Female	0.270
	(0.045)***
Education	0.597
	(0.028)***
Random effects:	var comp
Intercept	0.066***
Black	0.148***
Asian	0.344**
Hispanic	0.082*

[a] N=14,153; J=690. Dependent variable is "voted in 1996"; * significant at 10%; ** significant at 5%; *** significant at 1%. Estimates are from a logistic model estimated using restricted maximum likelihood in HLM; robust standard errors in parentheses.

[b] Excluded category for race is "white".

[c] Excluded category for income is "Over 100K".

Now I turn to the conditional models. The first conditional model (written as in (4)) is as follows:

$$\begin{aligned} turnout_{ij} = {} & \gamma_{00} + \gamma_{10} Female_1 + \gamma_{20} Black_{ij} + \gamma_{30} Asian_{ij} + \gamma_{40} Hispanic_{ij} \\ & + \gamma_{50} Eduction_j + \gamma_{60} Inc1_j + \gamma_{70} Inc2_j + \gamma_{80} Inc3_j + \gamma_{90} Inc4_j \\ & + \gamma_{100} Inc5_j + \delta_{0j} + \delta_{2j} Black_{ij} + \delta_{3j} Asian_{ij} + \delta_{4j} Hispanic_{ij} \\ & + \epsilon_{ij} \,. \end{aligned} \tag{7}$$

I have not included any city-level predictors yet but I do let the dummy variables for race vary randomly across cities in order to test the hypothesis that differences in voter participation between racial groups are not constant across cities. The estimates from this model are presented in Table 1. The results for these individual-level variables are largely consistent with existing research. Converting the logit coefficient to odds ratios, we see that the odds of voting are 31% higher for women than for men, net all other variables in the model. While some researchers do report that women participate to a lesser extent than men, much recent research points to the gender gap closing (Conway 2000, pp. 36-7) (Rosenstone & Hansen 1994, pp. 140-1). As mentioned earlier, education has long been seen as one of the most important predictors of political participation. The present estimates confirm this, indicating a strong positive effect of increased education on voting.

When it comes to comparing the odds of turning out between different racial groups, the differences increase somewhat. Comparing blacks and whites we see that the odds of casting a ballot are 11.5% smaller for black Americans, controlling for other factors. Indeed, the odds of turning out to vote are greater for white individuals than all other categories; Asians and Hispanics are 87.3% and 74.7% less likely respectively to vote than whites. Examining the bottom part of the table, it is evident that the estimates of the variance components of the random portion of the model—the randomly varying individual-level intercept, β_{0j}, and the randomly varying dummy variables for race, β_{2j}, β_{3j} and β_{4j}—are significant. That is, after controlling for the individual-level factors, there still remains a significant amount of variation both in voter turnout across cities and in the differences in voting between various racial groups across communities in the United States. The next step is to specify a model that tries to predict those varying slopes.

Finally, I turn to the full model with both individual-level variables and city-level predictors. This model contains the same individual-level variables as the previous model but here I also include the measure of racial heterogeneity, or fractionalization, described above and the percentage of blacks residing in the community. While the previous model estimated the slopes for each racial category by specifying these individual-level terms as random, in the full model I attempt to predict those slopes with my measure of racial heterogeneity. That is, I include cross-level interaction terms between the individual-level race dummies and racial fractionalization. In other words, in (7) I am testing the hypothesis that differences in voting between groups are not constant across cities; now I want to predict this variability using the level of racial heterogeneity in each city. The full model is as follows:

$$\begin{aligned} turnout_{ij} = {} & \gamma_{00} + \gamma_{01} RF_j + \gamma_{02} \%Black_j + \gamma_{10} Female_1 + \gamma_{20} Black_{ij} \\ & + \gamma_{21} RF_j * Black_{ij} + \gamma_{30} Asian_{ij} + \gamma_{31} RF_j * Asian_{ij} + \gamma_{40} Hispanic_{ij} \\ & + \gamma_{41} RF_j * Hispanic_{ij} + \gamma_{50} Eduction_j + \gamma_{60} Ic1_j + \gamma_{70} Inc2_j \\ & + \gamma_{80} Inc3_j + \gamma_{90} Inc4_j + \gamma_{100} Inc5_j + \delta_{0j} + \delta_{2j} Black_{ij} \\ & + \delta_{3j} Asian_{ij} + \delta_{4j} Hispanic_{ij} + \epsilon_{ij} \,. \end{aligned} \tag{8}$$

Of interest here are the estimates for the main effects of racial fractionalization and its effect on the random slopes of the four race categories included at the individual-level; the cross-level interactions. The other individual-level estimates remain largely unchanged in this model. Turning to the variables of interest, it is instructive to first examine the estimates of the variance components for the random effects. All the variance components

Table 2: Estimates of the effect of racial diversity on voting[a]

Variable:	Estimate
Intercept	1.362
	(0.071)***
Race[b]	
Black	-0.623
	(0.219)***
Asian	-2.625
	(0.365)***
Hispanic	-1.382
	(0.211)***
Income[c]	
$20K	-0.602
	(0.063)***
$20-29,000	-0.616
	(0.071)***
$30-49,999	-0.331
	(0.062)***
$50-74,999	-0.094
	(0.058)
$75-99,999	-0.113
	(0.070)
Female	0.266
	(0.045)***
Education	0.600
	(0.028)***
Contextual effects:	
Racial fractionalization	-0.532
	(0.203)***
% Black in community	0.004
	(0.002)**
Black x rac. frac.	1.076
	(0.445)***
Asian x rac. frac.	1.175
	(0.679)*
Hispanic x rac. frac.	0.109
	(0.418)
Random effects:	var comp
Intercept	0.062***
Black	0.116***
Asian	0.267**
Hispanic	0.075**

[a] N=14,153; J=690. Dependent variable is "voted in 1996"; * significant at 10%; ** significant at 5%; *** significant at 1%. Estimates are from a logistic model estimated using restricted maximum likelihood in HLM; robust standard errors in parentheses.

[b] Excluded category for race is "white".

[c] Excluded category for income is "Over 100K".

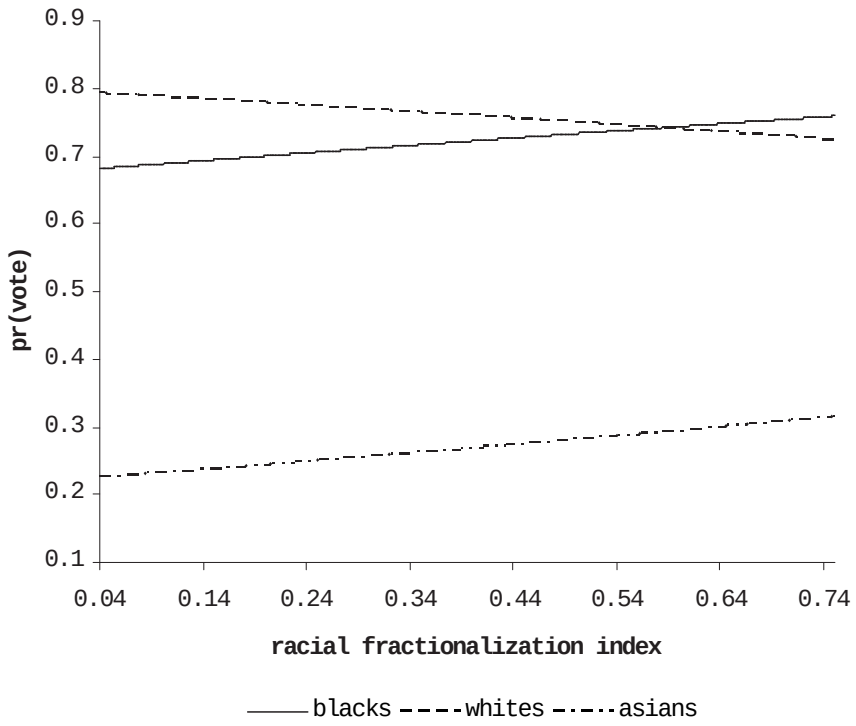

Figure 1: The Effect of racial diversity on the probability of voting among racial groups

have decreased from the previous model with the addition of the city-level factor of racial fractionalization, though only modestly, suggesting that the new variable is doing some work in reducing the unexplained variance across cities. The variance components remain significant, however, indicating that the city-level variables in the model do not explain all the variance across communities.[5] The effect of racial fractionalization on voting is significant though the coefficient does not have the expected sign. Increasing racial diversity, according to this model, decreases the likelihood of voting, contrary to the hypothesis set out in this paper. That is, the overall effect of racial diversity on participation is to decrease voting. However, the full model also takes into account that the variance in the probability of voting across cities for different racial groups may be predicted by racial diversity. The cross–level interactions for whites, blacks and Asians with racial fractionalization were all significant and suggest that racial heterogeneity affects minority groups differently from the white majority. Figure 1 illustrates graphically the effect of letting racial diversity predict the probability of voting for blacks, Asians and whites.[6] If you are black or Asian, your odds of voting increase with increasing levels of racial diversity. Furthermore, the effect on blacks of racial diversity is stronger than the overall negative effect of racial diversity discussed above. A black person moving from, say, the city of Rochester, with a score of 0.04 on the racial fractionalization index (a very homogenous community) to, for instance, Hartford CT, with a score of 0.67 (one of the more diverse

[5]While the tables contain the variance components, it also instructive to consider their co-variances. In the model presented in Table 2, the intercept is positively correlated with Asian, but negatively with black and Hispanic indicating that if white participation is high, the difference between white and Asian tends to be relatively small, but that between white and black or hispanic relatively large. Note that in such a case black participation may still be relatively (compared to other cities) high, but the difference between them and whites is larger than usual. The correlations between the race effects tell a similar story. They are positive between black and hispanic but negative between Asian and black or hispanic. This implies that in a city where the difference between white and black is large, it also tends to be large between white and hispanic but relatively small between white and Asian.

[6]The predicted effects are obtained by holding all independent variables at their mean and allowing the racial fractionalization index to vary over its full range found in the data.

cities in the sample) would represent a jump in the probability of voting from .681 to .750, holding all other factors constant. For a white person, the same move entails a drop in the probability of voting from .792 to .732.

6. Conclusion

Much previous research on the effects of racial diversity on civic engagement, social capital and political participation maintains that increased levels of diversity will serve to decrease political activity. In this paper I have argued the opposite; that people living in more diverse communities will be *more* likely to participate in politics. Inter–racial attitudes tend to be more conflictual in more diverse places where race and racial identity are more salient. That is, individuals see race relations in terms of a zero–sum competition over resources and their distribution. More racially diverse places should as a result be characterized by more conflict, more issues and therefore more political participation. I also hypothesized that the differences in voting between racial groups will vary between cities and this variability can, in part, be explained by racial heterogeneity.

The analysis shows that the effect of racial diversity on whites was in contrast to my hypothesis. That is, living in a more racially diverse place tends to lower the likelihood that a white individual votes. However, when racial fractionalization was used to predict the slope of each individual racial group, this relationship reversed. For black and Asian people, living in a more diverse community *raises* the probability of voting. The results from this analysis indicate that the relationship between racial diversity and political participation is not straightforward and that it impacts differently on people from distinct racial groups. Specifying a model where the individual effect of race is allowed to vary randomly across cities uncovers different results which remain "hidden" in models where race effects are fixed. In this model, racial heterogeneity becomes a strong predictor of participation for members of minority groups while the participation of whites remains negatively related to diversity. One needs to explicitly model the effect of diversity on separate racial groups in order to get at these associations.

Data Appendix

The data used in this paper come from two principle sources:

1. individual–level data come from the Social Capital Community Benchmark Survey. The survey was conducted by telephone using random–digit–dialing during July-November 2000. The survey consists of a national sample of 3003 respondents as well as 40 community samples whose sampling geography were determined by the local sponsors, totaling an additional 26,533 respondents;

2. city-level data come from the United States Census and Census of Governments and were extracted from the County and City Data Book CDROM.

In order to match each individual to data about their city of residence, geocodes for each respondent were obtained through an agreement with the Roper Center. Having the Federal Information Processing Standard (FIPS) code for each respondent, it was possible to determine the city of residence of each respondent and then to create a data set with information on those cities.

Level-1 variables

The dependent variable, electoral political participation, was measured by the Social Capital Community Benchmark Survey by the following question:

> "As you may know, around half the population does not vote in presidential elections. How about you - did you vote in the presidential election in 1996

when Bill Clinton ran against Bob Dole and Ross Perot, or did you skip that one?" Coded: 1=voted, 0=no.

The independent variables were coded as follows: *Female*: 1=female, 0=male; *Black*: 1=black, 0=all others; *Asian*: 1=Asian, 0=all others; *Hispanic*: 1=Hispanic, 0=all others; *White*: 1=white, 0=all others; *Education* is coded: 1=less than high school, 2=high school diploma, 3=some college or 2 year associate degree, 4=Bachelor degree or higher; *Inc1* is a dummy for income and coded 1=less than $20,000, 0=all others; *Inc2*, 1=$20-$29,999, 0=all others; *Inc3*, 1=$30-$49,999, 0=all others; *Inc4*, 1=$50-$74,999, 0=all others; *Inc5*, 1=$75-$99,999, 0=all others; *Inc6*, 1=over $100,000, 0=all others.

Level-2 variables

Racial fractionalization is an index constructed from the US Census according to the following formula:

$$racial fractionalization = 1 - \sum_{k} S_{ki}^2$$

where i represents a given city and k the following races: (i) White; (ii) Black; (iii) American Indian, Eskimo, Aleutian; (iv) Asian, Pacific Islander; (v) Hispanic. Each term S_{ki} is the share of race k in the population of city i. The index measures the probability that two randomly drawn individuals in area i belong to different races and takes on values between 0 and 1. Higher values of the index represent more racial heterogeneity. *Percent black* is the percentage of the African-American population in the city.

Table 3: Descriptive statistics

Variables	N	Min.	Max.	Mean	S.D.
Individual–level variables					
Voted in '96	14153	0	1	0.70	0.45
Female	14153	0	1	0.59	0.49
Black	14153	0	1	0.18	0.38
White	14153	0	1	0.61	0.48
Asian	14153	0	1	0.04	0.19
Hispanic	14153	0	1	0.12	0.33
Less than $20K	14153	0	1	0.14	0.35
$20-29.999	14153	0	1	0.14	0.34
$30-49.999	14153	0	1	0.23	0.41
$50-74.999	14153	0	1	0.18	0.38
$75-99.999	14153	0	1	0.15	0.35
Over $100K	14153	0	1	0.17	0.37
Education	14153	1	8	3.02	0.95
City–level variables					
Racial fractionalization	690	0.04	0.75	0.35	0.17
Percent black	690	0.04	93.69	12.47	16.08

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