Civic Engagement and Community Heterogeneity: An Economist's Perspective

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"Now many of them [economists] are writing about neighborhood get-togethers, PTAs, Bible study classes, and the like. . . . *This is not necessarily a good thing."*

Fischer (2001)

INTRODUCTION

Economists do bowl with political scientists and sociologists, but in separate lanes. More than ever, economists are recognizing the importance of institutions, such as the judicial system and transparent governance, in determining economic performance.[1] What produces good institutions? A growing number of economists are pointing to social capital. Low levels of trust predict less efficient judiciaries, more corruption, and lower-quality government bureaucracies.[2] High levels of trust predict economic growth[3] and financial development.[4] The absence of social capital may explain low levels of spending on such public goods as education and welfare.[5]

The question then becomes, what produces social capital? According to one definition, social capital refers to aspects of the network structure, such as social norms and sanctions, mutual obligations, trust, and information transmission, that encourage collaboration and coordination between friends and strangers.[6] Social capital is thus embodied within society. According to another definition, it is a person's social characteristics, including the size of her Rolodex, that help her reap market and nonmarket returns from interactions with others but that cannot be evaluated without knowledge of the social structure in which she operates.[7] Whether an attribute of an individual or a society, social capital is produced by individuals' participation decisions. An individual can increase the number and depth of his connections with others, but the value of those network connections depends upon the extent (both quality and quantity) of others' participation. Social capital therefore depends both upon individual socioeconomic and demographic characteristics and upon the characteristics of society.

This paper provides an overview of the mushrooming economics literature on how community attributes influence the level of civic engagement. Since 1997, at least 15 empirical papers have investigated the consequences of heterogeneity for social capital. Social capital has been measured using indicators of group participation (such as volunteer activity, organizational membership and activity, entertaining and visiting friends and relatives, and voting), indicators of the

strength of network ties (such as trust), and indicators of community commitment (such as public expenditures and loan repayment to community members). These papers cover different nations, different social capital measures, and even different centuries. But a common theme emerges from these 15 studies: more-homogeneous communities foster greater levels of social capital production. After we touch upon the literature, we synthesize our past work on volunteering and membership in the United States over the last 20 years with new findings on trust and voting. We also discuss our work on community in the U.S. military during the Civil War.

WHY DOES HETEROGENEITY MATTER?

The benefits of community diversity have been studied in a variety of contexts. Cities with more diverse industries (rather than a completely specialized city) should experience greater rates of growth because the transfer of ideas and learning is greater in a diverse environment.[8] More diverse cities are better insured against risk. Portfolio risk minimization hinges on diversification—that is, holding dissimilar assets. Glaeser, Schliefer, Kallal and Scheinkman (1992) study economic growth in U.S. counties and report evidence supporting the Jacobs hypothesis. Bowen and Bok (1998) report that there were substantial social interactions between white and black students at elite schools and that alumni pointed to these college interactions as helping them to relate to members of different racial groups later in life. Ethnic heterogeneity provides many of our major cities with their charm and epicurean variety. Disgust with suburban sprawl is partially generated by the homogeneity of the housing stock.

Diversity also imposes costs. Whether in choosing a college roommate, a residential community, or a place to pray, people tend to self-segregate. They prefer to interact with others like them because of shared interests, socialization to the same cultural norms, and greater empathy toward individuals who remind them of themselves. Members of minority groups may prefer to interact with other minority members if they fear discrimination. The coordination necessary for groups to form and to become active is easier if members speak a common language. When Harvard began randomized assignment to undergraduate residence halls, minority resident tutors argued that this had destroyed a "supporting and nurturing community . . . [in which] students of color felt comfortable, academically, socially, personally".[9]

Our focus is not on why people try to self-segregate, but on why people take very different actions when they interact in a "homogeneous" environment versus a "heterogeneous" environment.[10] Alesina and La Ferrara (2000) present a formal model of participation in a heterogeneous society, in which they assume that people prefer to self-segregate. They point out that the face-to-face interactions important for building social capital are only possible when everyone lives in the same physical community or travels from afar to meet. Because travel is costly, a minority group may be too small within a residential area to form its own club. In such a situation, the group can either join a heterogeneous group in which they are the minority or else not participate at all. The Harvard tutors argued that this is a recipe for low levels of participation—"[b]y sprinkling a 'manageable' number of minority students in each of the 12 houses one does not necessarily ensure increased student interaction".[11] If the minority group is too small to form its own club *and* an area's heterogeneity increases, participation will fall. Only if the minority group becomes large enough to form its own club will an increase in the area's heterogeneity lead to an increase in overall participation. Which outcome is most likely is ultimately an empirical issue.

RECENT ECONOMIC LITERATURE

Over the last five years, at least 15 different empirical economic papers have studied the consequences of community heterogeneity, and all of these studies have the same punch line: heterogeneity reduces civic engagement. In more diverse communities, people participate less as measured by how they allocate their time, their money, their voting, and their willingness to take risks to help others. The appendix to this paper provides an outline of these studies. It is arranged into three broad categories: the contemporary United States, international studies, and historical U.S studies.

U.S studies have focused on three different measures of civic engagement: group participation, state spending, and trust. Using General Social Survey data, Alesina and La Ferrara (2000) find that organizational membership is lower in metropolitan areas that feature greater racial and ethnic diversity and higher income inequality. Vigdor (2001) reports that in counties featuring higher levels of ethnic fragmentation, the rate of response to the 2000 Census form is lower, suggesting reduced willingness to provide a public good (information about oneself that determines the community's receipt of federal funds).

A second measure of civic engagement is the willingness to redistribute income. Luttmer (2001), using data from the General Social Survey and from California ballot initiatives, finds that support for redistribution is higher when the recipients are from the same racial group. Researchers have found a similar result for public education. Poterba (1997) and Harris, Evans, and Schwab (2001) report evidence of a "Florida effect" in states' public school expenditures. In Florida the "average" taxpayer is a white senior citizen, while the typical public school student is Hispanic. In this diverse environment, there is less support for public school expenditures than in states where the students and the taxpayers are of the same ethnicity. Goldin and Katz (1999) find that a similar pattern prevailed in the past—racial, ethnic, and religious diversity and income inequality predicted state educational expenditures. Data from U.S. cities, metropolitan areas, and urban counties show that the share of spending on such productive public goods as education, roads, sewers, and trash pickup is inversely related to the area's ethnic fragmentation, even after controlling for other socioeconomic and demographic characteristics.[12] Not only is participation and expenditure lower in more-diverse settings, but so is trust. Self-reported levels of trust[13] and experimental evidence[14] document that when individuals interact with people who look like them, levels of trust in the community are higher.

Recently, development economists have used new data sets to investigate social capital production abroad. A distinguishing characteristic of these papers is developing new empirical proxies for the presence of social capital. Papers that examine developed countries rely heavily on membership, volunteering, and trust as proxies for social capital. While it is intuitive that such indicators are correlated with social capital, our confidence in our ability to measure social capital would be raised if we had more indicators. One of the more interesting indicators in the development literature is default rates on micro-finance loans, an important source of funds for the poor. If there is strong social capital within the group providing and receiving loans, then default is lower as well because altruism, peer pressure, and social sanctions enforce repayment. Karlan (2002) reports evidence from Peru that cultural similarity within the community of loan recipients lowers default rates. Similar in spirit to the U.S research on public expenditure patterns, Miguel and Gugerty (2002) report evidence of lower school funding in communities that are more ethnically diverse. There is also evidence that income inequality lowers civic participation and community expenditure.[15]

CIVIC PARTICIPATION AND COMMUNITY HETEROGENEITY: EVIDENCE

Heterogeneity may be measured in several ways, including race, ethnicity, income, educational or work experiences, and religion. We will focus mainly on race, ethnicity, and income. Our measures of distance are for the most part calculated for metropolitan areas and include the Gini coefficient of weekly wages for full-time, full-year men ages 21-64, as well as fragmentation indexes for race and birthplace. Recall that the Gini coefficient measures the extent of departure from a perfectly even distribution of income, with a Gini of 0 indicating perfect equality and a Gini of 1 perfect inequality. In the case of fragmentation indexes, a value of 0 indicates complete homogeneity and a value of 1 complete heterogeneity. For example, our racial fragmentation index for each metropolitan area, *i,* is

$$f_i = 1 - \sum_k s_{ki}^2$$

where *k* represents the categories (white, black, American Indian, Asian, and other) and where s_{ki} is the share of race *k* in metropolitan area *i.* Our birthplace fragmentation index is similarly constructed. [16]

Evidence from the United States Today

Our evidence for the impact of metropolitan-area heterogeneity on civic engagement comes from examining volunteering in the 1974 and 1989 Current Population Survey (CPS) and in the 1975-1998 DDB Lifestyle Survey (DDB), membership in non-church organizations in the 1952 and 1972 American National Election Survey (ANES) and in all organizations in the 1974-1994 General Social Survey (GSS), and trust in the 1972-1998 GSS. In addition, we examine the impact of ethnic heterogeneity among registered voters within a census tract on voter turnout. One of the benefits of group membership is that through participation relations between individuals are transformed into positive ties, that is into trust.[17] Many scholars have therefore used trust as an aggregate measure of social capital.

Table 1 shows that volunteering, membership, and trust among 25- to 54-year-olds are lower in heterogeneous communities, particularly those in which wage inequality is high. An increase in the Gini coefficient of 0.058 (such as occurred between the mid-1970s and 1990) lowers the probability of volunteering in the CPS and DDB and of organizational membership and trust in the GSS by 0.03.[18] Although the Gini coefficient is not a significant predictor of membership in the ANES, an increase in the Gini coefficient of 0.027 (such as occurred between 1950 and 1970) lowers the probability of membership by 0.02. Birthplace fragmentation is a significant predictor of volunteering in the

CPS and of membership in the GSS. The increase of 0.053 in birthplace fragmentation that occurred between the mid-1970s and 1990 predicts that the probability of volunteering in the CPS and membership in the GSS should fall by 0.01. Racial fragmentation is a significant predictor of volunteering in the DDB and of membership in the ANES. The increase of .007 in racial fragmentation from the mid-1970s to 1990 predicts imperceptible declines in volunteering in the DDB. The increase of 0.092 in the racial fragmentation index from 1950 to 1970 predicts a decline in nonchurch group membership in the ANES of 0.04.

[TABLE 1 WILL GO HERE]

We do not expect that all groups will react similarly to changes in their community. For Americans older than 64, birthplace fragmentation was the single most important predictor of volunteering, membership, and trust (see Table 2). The Gini coefficient for wage income was an insignificant predictor and racial fragmentation was a significant predictor only of volunteering in the DDB. The increase in birthplace fragmentation from the mid-1970s to 1990 predicts a decline among older Americans of 0.01 in the probability of volunteering and trust and of 0.02 in the probability of membership. For African-Americans (not shown), we found smaller declines in volunteering in the CPS than among whites. While birth place fragmentation had predictive power in explaining both the level and the trend of black volunteering rates, the Gini coefficient did not.

[TABLE 2 WILL GO HERE]

We explain only a small proportion of total variance, but we would expect that, since there are so many traits affecting a person's level of trust or engagement that we cannot measure here. Such traits include a person's affability or altruism, both of which are not captured in these surveys. Nevertheless, the results are meaningful. The data show, overall, a relatively small decline in social capital from the 1970s to 1990—and rising heterogeneity explains these declines very well.

Community heterogeneity explains not only the level of civic engagement at a point in time, but also changes in the level of civic engagement over time. Metropolitan areas in the United States have become more fragmented by income,

race, and ethnicity since the 1970s. Our measures of the Gini coefficient for full-time male workers, racial fragmentation, and fraction black increase from 1950 to 1990. Our measures of birthplace fragmentation and foreign-born fragmentation decrease from 1950 to 1970 then increase until 1990.[19]

Table 3 demonstrates the impact of changes in community heterogeneity on trends in social capital controlling for demographic and socioeconomic characteristics.

[TABLE 3 WILL GO HERE]

Note that not all surveys show declines in social capital in identifiable metropolitan areas. The declines for people ages 25 to 54 are in volunteering in the CPS (particularly among women) and in membership and trust in the GSS. Membership declined sharply in the early 1980s relative to the 1970s (not shown), precisely mirroring the sharp increase in inequality, but then leveled. The Gini coefficient was a particularly important predictor for membership in sports, youth, church, literary, and hobby clubs, but not in professional organizations, suggesting that when interpersonal contact is high, people prefer to be with others like them. Controlling for heterogeneity explains anywhere from one-third to almost all of the declines in volunteering, membership, and trust among people ages 25 to 54. Among older Americans both membership and trust declined, with the largest declines in membership occurring in the late 1980s, thus coinciding with increases in immigration. Only the decline in membership can be explained by heterogeneity.

Voting rates provide another measure of community participation at a point in time. Since voting is costly, but one's vote "doesn't matter," economists wonder why everyone does not free-ride. In a community with more social capital and more of a civic sense, voting rates are likely to be higher as residents do not pursue only their own narrow self-interest. The Institute of Government Studies at the University of California at Berkeley has created a database by census tract on voter turnout rates (as a fraction of registered voters) and tract demographics (based on registered voters). We use data from the 1998 primaries and the 2000 general election. Controlling for county fixed effects and the age and sex distribution of a census tract, we study whether census tracts featuring higher levels of ethnic fragmentation have lower voter turnout rates. Our ethnic fragmentation measure is based on the following categories: Latino, Jewish, Korean, Japanese, Chinese, Asian-Indian, Vietnamese, Filipino, and other.[20] In both statistical models (1998 primaries and 2000 general election) we find evidence that, all else being equal, increased ethnic fragmentation

lowers voter turnout rates. Based on the year 2000 regression model, increasing a census tract's ethnic fragmentation by one standard deviation lowers voter turnout rates by two percentage points.[21]

International Evidence

Both high income inequality and low ethnic heterogeneity predict low membership across some, though not all, western European countries (see figure 1). The fraction of the population participating actively in a group is very high in Norway, Sweden, Finland, and Germany, all of which have relatively low income inequality and high ethnic heterogeneity. Similarly, the fraction of the population participating actively in a group is low in Belgium, Spain, and the United Kingdom, all of which have relatively high heterogeneity of income and ethnicity. These fit our hypothesis. Conversely, Italy, Ireland, France, and Portugal have lower rates of participation than one would expect from their high levels of income and ethnic homogeneity. Participation in the Netherlands marginally fits our hypothesis; Denmark and Austria are ambiguous if heterogeneity is measured by income disparities and contradict our argument if the measure is ethnic difference.

[FIGURE 1 WILL GO HERE]

Figure 1 poses the interesting riddle of what other factors, besides community heterogeneity, help to determine civic engagement. Unfortunately, we cannot do much on this question with our few data points and the kind of evidence we have available.

Evidence from the Past

Looking to the past provides us with the opportunity to study the role of heterogeneity in civic engagement in a very different environment. However, there are no large surveys on membership, volunteering, or trust. Skocpol, Ganz, and Munson (2000) identified the large voluntary associations from the colonial period to the 1940s and discovered that they operated as an amalgam of national authority and local involvement, modeled on the United States Constitution. A unique data set on 303 Union Army infantry companies (with each company containing 100 men) allows us to study the effect of a both "local" and "national" factors on civic engagement during the war as measured by the probability of

desertion, absence without leave (AWOL), and arrest.[22] Company heterogeneity is our "local" variable. Our "national" variables are morale and ideology.

The Union Army data have two main advantages over survey data. One is that the measure of community is much narrower. Our measure of community is not the commonly used metropolitan area, but a company that consists of 100 men in close and constant contact. The second advantage is that our measure of participation, unlike membership in many organizations, was not "cheap talk." Shirking in the Civil War was costly to one's comrades, but it was also expensive for individual soldiers not to shirk. One out of every five white men participating in the Civil War died, over half of them from disease. The combatants faced death, the hardships and monotony of camp life, and distance from loved ones, all for low and irregular pay. One soldier wrote, "I have cursed the day I have enlisted for what benifit [sic] will I ever drive from being a Soldier. the common Soldier will not reap the Harvest of Victories but it is some other men that will gain all Praise Honor and Wealth."[23] Had he deserted, he would have faced only a 40 percent chance of being caught and a negligible risk of death if arrested.[24] A self-interested soldier would have deserted. But more than 90 percent of all Union Army soldiers did not[25]; and among Union Army soldiers whose three-year enlistment terms were up, half of them re-enlisted.[26] Was social capital the glue that kept men loyal to the Union? What role did homogeneity play in building this social capital? Men in homogeneous units may have felt more altruism toward their fellow soldiers, have desired their esteem, and have feared their social sanctions.

We created community variables for each company by constructing birth place and occupational fragmentation indexes and by estimating the coefficient of variation of age, an indicator of age diversity.[27] Another community variable is population in city of enlistment, an indicator of peer pressure. We control for such individual characteristics as age, birthplace, height, personal property wealth in 1860, illiteracy, and marital status. We control for ideology using year of muster (because men who enlisted after 1862 when the draft was in place and when enlistment bounties were offered were labeled unpatriotic), volunteer status, and voting in the 1860 presidential election. We also control for gyrations in morale over the course of the war.[28]

[FIGURE 2 WILL GO HERE]

Figure 2 shows predicted desertion, arrest, and AWOL rates holding socioeconomic and demographic characteristics, ideology, and morale constant under two scenarios: one uses the true company characteristics and the other assumes complete company homogeneity. In the case of desertion, the single-most important variables were age and occupational diversity within the company. In the case of arrests, birthplace and occupational fragmentation were also important. Birthplace diversity and age diversity were the most important predictors of AWOL. Compared to variables such as morale and ideology, our heterogeneity measures (company socioeconomic and demographic characteristics) were more important predictors of social capital (proxied by desertion, arrest, and AWOL), even in one of the more ideological wars in our country's history.[29]

Conclusion

Economists love to measure capital stocks. Adam Smith and Karl Marx encouraged us to look at capital flows. Theodore Schultz and Gary Becker emphasized the importance of human capital. Michael Grossman and Victor Fuchs focused our attention on health capital. Robert Putnam's work has now turned our interest to social capital. Although it is harder to measure than physical, financial, human, or health capital, economists have become fascinated by social capital.

This paper has documented an empirical regularity—civic engagement is lower in more-heterogeneous communities. While a large number of applied-economics papers are independently generating this finding, a number of questions remain. Ideally, we would want to study how civic engagement changes as we move people into different types of communities. But what is an individual's community? Because of data limitations, researchers are using the metropolitan area as the measure of community, not the nearest neighbors or coworkers. Even if we had narrower measures of community, we would still wonder whether being in a particular neighborhood leads to greater activity or whether those more likely to be involved picked that neighborhood. Ideally we would want to follow individuals over time and observe their response to random exogenous shocks that change their community, such as immigration increases into a border port or European labor market integration.

If homogeneity increases civic participation, why are so many in our society pushing for diversity in the workplace and in communities? This tension reflects a classic externality problem. Social capital is an unusual commodity. No one can

buy or sell it in the marketplace. It is a by-product of individuals' collective choices on how to allocate their scarce time. Volunteers compare their own private costs and benefits of donating their time; they rarely consider the long-run social benefits of having diverse groups interact—which may be economic as well as social. A firm with a diverse leadership may be better positioned to take advantage of opportunities in different markets and to find skilled workers from different backgrounds. They may need to introduce heterogeneity into their work force to find workers whose skills complement one another's.[30] From society's perspective, racial and ethnic equality and equality of access may be more important values than achieving greater civic participation.

Can diversity ever increase civic engagement in community organizations that cut across ethnic, racial, or income divisions? If people realize that their skills are complements, then they will seek out individuals different from themselves to work together to achieve a common goal more effectively. If a community fair will generate more revenue for the local school when there are diverse food offerings from every culture, instead of endless Apple Betties, then more parents will be pressured to become involved and more will agree to do so.[31]

Future research that draws on the insights of many disciplines may reveal the mechanisms through which heterogeneity lowers social capital. Social capital could thus serve as a bridge between the social sciences. Hopefully civic engagement among social capital scholars will continue to rise despite the increase in intellectual community heterogeneity brought about by the entry of economists.

Appendix. Civic Engagement and Heterogeneity: Economics Literature Review

Contemporary U.S.		
Alesina, Baqir, Easterly (1999)	Entire US	Public goods expenditure inversely related to area's ethnic fragmentation
Alesina and La Ferrara (2000)	Entire US	Group participation lower when ethnic, racial, and income fragmentation higher
Alesina and La Ferrara (forthcoming)	Entire US	Trust lower when racial and income fragmentation higher
Costa and Kahn (forthcoming, b)	Entire US	Group participation lower when ethnic, racial, and especially income fragmentation higher
Glaeser, Laibson, Scheinkman, and Soutter (2000)	Harvard undergraduates	Trust higher when race and nationality same
Harris, Evans, Schwab (2001)	Entire US	State spending on education lower when share of elderly rising
Luttmer (2001)	Entire US	Support for welfare spending higher if greater share of welfare recipients from own racial group
Poterba (1997)	Entire US	State spending on education lower when share of elderly rising and from different racial group than school children
Vigdor (2001)	Entire US	Census response rate lower in counties where higher ethnic fragmentation
International		
Karlan (2002)	Peru	Cultural similarity reduces NGO loan default rates
La Ferrara (2000)	Tanzania	Income inequality reduces group membership
Lindert (1996)	OECD	Income inequality reduces expenditures on social programs
Miguel and Gugerty (2002)	Kenya	Lower school funding and quality and poor water well maintenance in more ethnically diverse

		communities
Historical US		
Costa and Kahn (forthcoming, a)	Union Army (Civil War)	Desertion higher when age and occupational diversity in company greater
Goldin and Katz (1999)	Entire US	High school expansion greater when income, ethnic, and religious homogeneity higher

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Table 1: Impact of Community Heterogeneity on Probability of Participation and Trust, 25- to 54-Year Olds

	Volunteering	**Volunteering**	**Membership**	**Membership**	**Trust**
	Current Population Survey 1974-1989 $\frac{\partial P}{\partial x}$	DDB Lifestyle Survey 1975-1998 $\frac{\partial P}{\partial x}$	American National Election Survey 1952-1972 $\frac{\partial P}{\partial x}$	General Social Survey 1974-1994 $\frac{\partial P}{\partial x}$	General Social Survey 1972-1998 $\frac{\partial P}{\partial x}$
Probability of participation/trust	0.247	0.536	0.642	0.720	0.409
Gini coefficient	-0.472†	-0.478‡	-0.594	-0.540*	-0.439*
	(0.202)	(0.191)	(1.424)	(0.287)	(0.270)
Birthplace fragmentation	-0.174‡	-0.011	-0.109	-0.173‡	-0.064
	(0.049)	(0.045)	(0.196)	(0.003)	(0.083)
Racial fragmentation	-0.052	-0.129‡	-0.450†	0.069	-0.081
	(0.038)	(0.044)	(0.214)	(0.052)	(0.073)
Pseudo R^2	0.089	0.042	0.098	0.083	0.100

Source: Costa and Kahn (forthcoming, b) and authors' calculations from General Social Survey. Derivatives from probit regression are given. Robust standard errors are in parentheses. The symbols *, †, and ‡ indicate significance at 10, 5, and 1 percent, respectively. The dependent variable in the Current Population Survey and the DDB Lifestyle Survey is a dummy equal to one if an individual did any volunteer work in the past 12 months. Reported volunteering differs across surveys. The dependent variable in the American National Election Survey is a dummy equal to one if the

individual was a member of a nonchurch organization. The dependent variable in the General Social Survey for membership is a dummy equal to one if an individual reported membership in any organization. The dependent variable for trust is a dummy equal to one if an individual reported that most people can be trusted. Additional controls include age, sex, race, education, region of residence, and year of survey. The samples are restricted to individuals in identifiable metropolitan areas.

Table 2. Impact of Community Heterogeneity on Probability of Participation and Trust, Age 65+

	Volunteering	**Volunteering**	**Membership**	**Trust**
	Current Population Survey 1974-1989 $\frac{\partial P}{\partial x}$	DDB Lifestyle Survey 1975-1998 $\frac{\partial P}{\partial x}$	General Social Survey 1974-1994 $\frac{\partial P}{\partial x}$	General Social Survey 1972-1998 $\frac{\partial P}{\partial x}$
Probability of participation and trust	0.160	0.518	0.705	0.406
Gini coefficient	0.023	0.004	-0.322	0.307
	(0.213)	(0.339)	(0.557)	(0.330)
Birthplace fragmentation	-0.122‡	-0.143†	-0.288†	-0.208†
	(0.041)	(0.069)	(0.131)	(0.098)
Racial fragmentation	0.006	-0.215‡	0.055	-0.132
	(0.036)	(0.069)	(0.113)	(0.097)
Pseudo R^2	0.076	0.027	0.064	0.069

Source: Authors' calculations. Derivatives from probit regression are given. Robust standard errors are in parentheses. The symbols *, †, and ‡ indicate significance at 10, 5, and 1 percent, respectively. The dependent variable in the Current Population Survey and the DDB Lifestyle Survey is a dummy equal to one if an individual did any volunteer work in the past 12 months. Reported volunteering differs across surveys. The dependent variable in the General Social Survey for membership is a dummy equal to one if an individual reported membership in any organization. The

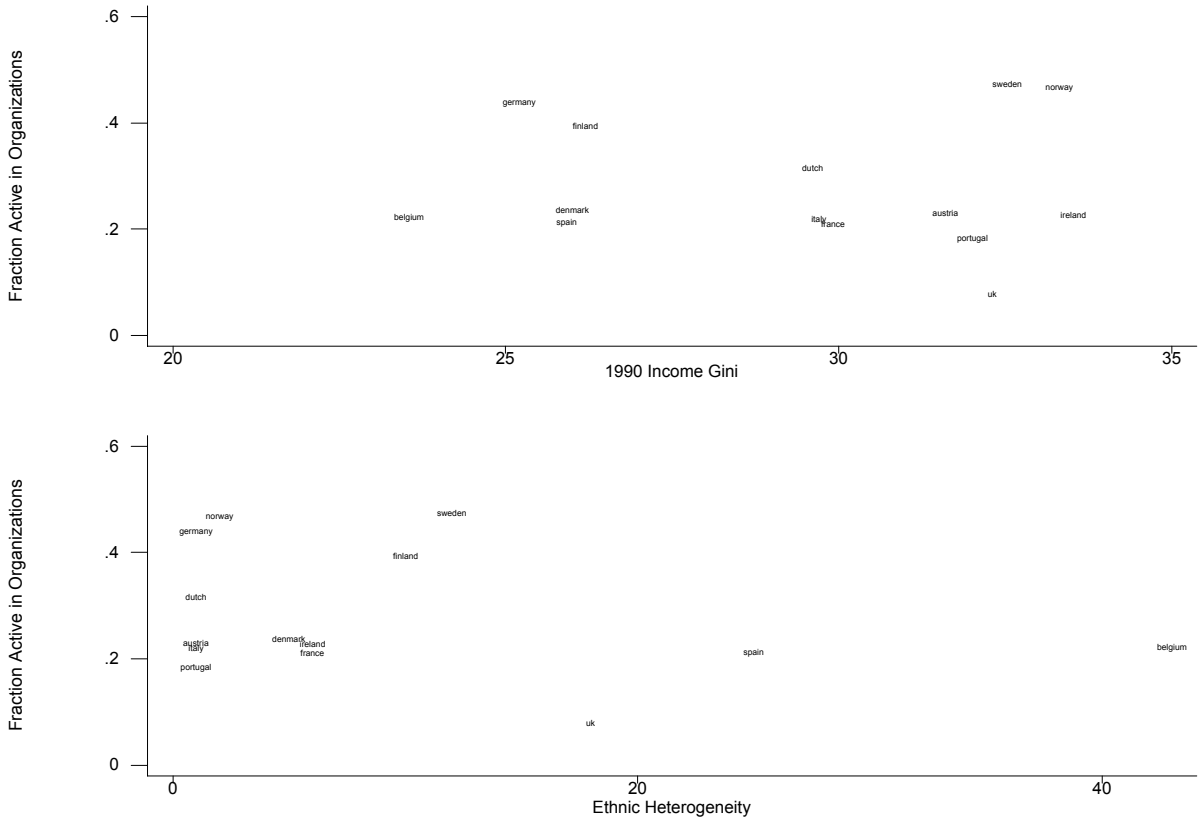
dependent variables in the General Social Survey for trust is a dummy equal to one if an individual reported that most people can be trusted. Additional controls include age, sex, race, education, region of residence, and year of survey. The samples are restricted to individuals in identifiable metropolitan areas. We did not include a measure of age-65+ membership from the American National Election Survey because there were too few observations to be statistically reliable.

Table 3: Declines in Probability of Participation Controlling for Demographic and Socioeconomic Characteristics and Fraction Decline Explained by Heterogeneity

	Volunteering	Membership	Trust
	Current Population Survey 1974-1989	General Social Survey 1974-1994	General Social Survey 1972-1998
Age 25-54			
Decline among men	0.031	0.105	0.148
% decline explained by heterogeneity	90%	40%	32%
Decline among women	0.063	0.105	0.148
% decline explained by heterogeneity	56%	40%	32%
Age 65+			
Decline among men	None	0.047	0.149
% explained by heterogeneity		66%	None
Decline among women	None	0.047	0.149
% explained by heterogeneity		66%	None

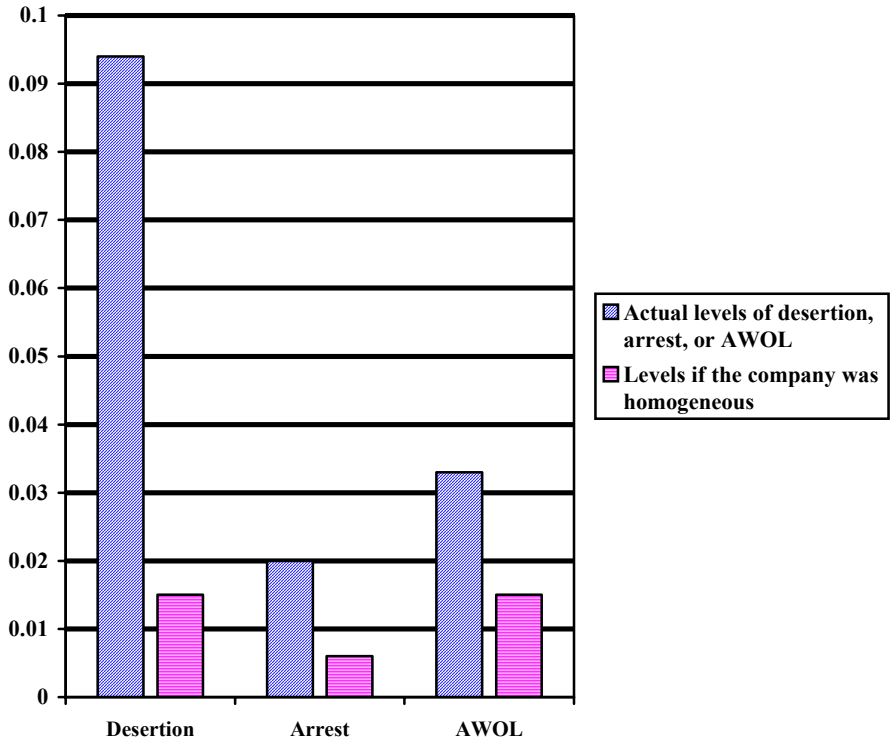
Source: Costa and Kahn (forthcoming, b) and authors' calculations. The dependent variable in the CPS is a dummy equal to one if an individual did any volunteer work in the past 12 months. Reported volunteering differs across surveys. The dependent variable in the GSS for membership is a dummy equal to one if an individual reported membership in any organization. The dependent variable in the GSS for trust is a dummy equal to one if an individual reported that most people can be trusted. Demographic and socioeconomic controls include age, race, education, region of residence, and year of survey. The samples are restricted to individuals in identifiable metropolitan areas.

Figure 1: Participation and Income Inequality and Ethnic Homogeneity Across Western Europe, 1990-1997



Source: Estimated from *World Values Surveys and European Values Surveys, 1990-1993, 1995-1997* (Inglehart et al. (2000)). Participation rates are for all adults and are averaged across all survey years. The Gini coefficients are from *Measuring Income Inequality: A New Database* (Deininger and Squire, http://www.worldbank.org). Note that other studies have found that inequality in the UK and in Spain is closer to the levels observed in Portugal (e.g. Ercolani and Jenkins 1998). However, for consistency we use Gini coefficients from one database. Ethnic homogeneity indexes are from Knack and Keefer (1997).

Figure 2: Predicted Probabilities of Desertion, Arrest, and AWOL in Union Army By Company Heterogeneity



Source: Costa and Kahn (forthcoming, a). Desertion, AWOL, and arrest probabilities are predicted from competing risks models, which control for individual demographic and socioeconomic characteristics, morale, and ideology. A homogeneous community refers to a community with birthplace fragmentation, occupational fragmentation, and the coefficient of variation for age equal to zero and a population in city of enlistment equal to 2,500.

[1] For example, World Bank 2002.
[2] La Porta et al. 1997
[3] Knack and Keefer 1997; Easterly and Levine 1997
[4] Guiso et al. 2000
[5] Alesina et al. 1999; Harris et al. 2001; Luttmer 2001; Poterba 1997; Miguel and Gugerty 2002; Goldin and Katz 1999
[6] Coleman 1988
[7] Bourdieu 1986; Glaeser et al. 2000
[8] Jacobs 1969
[9] Dolgonos and Lamas 2000
[10] We are assuming that individuals are assigned a peer group and then we ask how the collective characteristics of this peer group affect individual choices on civic engagement.
[11] Dolgonos and Lamas 2000
[12] Alesina, Baqir, and Easterly 1999
[13] Alesina and La Ferrara forthcoming
[14] Glaeser, Laibson, Scheinkman, and Soutter 2000
[15] La Ferrara 2002 and Lindert 1996
[16] We calculated, by metropolitan area, the fraction of individuals born in the United States, Puerto Rico, Latin America, Cuba, white English speaking nations, Scandinavia, northern Europe, southern Europe, eastern Europe, east Asia, southeast Asia, the Mideast, Africa, and other. Metropolitan area characteristics are estimated from the Integrated Public Use Census Samples for 1950, 1970, 1980, and 1990 (Ruggles and Sobek 1997).
[17] Another benefit of group participation is of course its observed correlation with political participation (e.g. Verba, Schlotzman, and Brady 1995).
[18] We arrive at the figure of 0.03 by multiplying the increase in the Gini coefficient (in this case, 0.06 from the mid-1970s to 1990) by the reported slope of the regression coefficients in the table (in this case, 0.5).
[19] Costa and Kahn (forthcoming, a).
[20] The data set does not contain information on the racial composition of census tracts.
[21] Source: Authors' calculations from data at http://swdb.berkeley.edu/data/. Sample size equals 6,891 for the 1998 primaries and 7,052 for the 2000 general election. The regressions are weighted by total number of registered voters within a census tract. Ordinary least squares regression coefficients are –0.071 and –0.141 for 1998 primaries and 2000 general election respectively. Robust standard errors are 0.006 and 0.007. Adjusted R^2 for 1998 primaries is 0.561 and for 2000 general election is 0.564.
[22] The data were collected by Robert Fogel and are available from http://www.cpe.uchicago.edu. The data set contains 31,854 white, enlisted men, representing roughly 1.3 percent of all whites mustered into the Union Army and 8 percent of all regiments that comprised the Union Army. The data are based upon a cluster sample (drawn at the company level) of 331 companies and 100 percent sampling within each company. Ninety-one percent of the sample consists of volunteers, with the remainder evenly divided between draftees and substitutes. A black sample of companies is currently being collected.
[23] Letter of John S. Voltz to his brother, 2/10/1865, University Libraries of Virginia Tech, http://scholar2.lib.vt.edu/spec/voltz.
[24] Linderman 1987: 174, 176
[25] Linderman 1987
[26] McPherson 1997: 81-82
[27] Our birth places are the United States, Germany, Ireland, Great Britain, and other. Our occupations are farmer, high and low class professional or proprietor, artisan, and high and low skilled laborer.
[28] See Costa and Kahn [2001b] for details
[29] The same result will not necessarily hold true for black Civil War soldiers because they may have been more committed to the cause and because, after the massacre at Fort Pillow, surrender to the enemy was not an option.
[30] Athey, Avery and Zemsky 2000
[31] A more real-world example may be a community developing many religious congregations which later engage in ecumenical exchanges.