UNDERSTANDING THE DECLINE IN SOCIAL CAPITAL, 1952-1998

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ABSTRACT

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We evaluate trends in social capital since 1952 and assess explanations for the observed declines. We examine both social capital centered in the community and in the home and argue that the decline in social capital has been over-stated. Controlling for education, there have been small declines in the probability of volunteering, larger declines in group membership, and still larger declines in the probability of entertaining since the 1970s. There have been no declines in the probability of spending frequent evenings with friends or relatives, but there have been decreases in daily visits with friends or relatives. Rising community heterogeneity (particularly income inequality) explains the fall in social capital produced outside the home whereas the rise in women's labor force participation rates explains the decline in social capital produced within the home.

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1   Introduction

Only eight percent of Americans report never spending the evening with a friend.[1]   Aspects of the social structure such as trust, networks, and conventions that encourage collaboration and coordination between friends and strangers determine our ability to achieve common goals. These beneficial relations among organizations and individuals, referred to as social capital (Coleman 1990), have important economic ramifications. Social interactions and networks are mechanisms for the provision of public goods and for the transmission of new ideas and of shared values, increasing aggregate human knowledge and developing the trust necessary for the functioning of capital and labor markets. La Porta et al. (1997) show that worldwide trust is associated with more efficient judiciaries, less corruption, and higher quality government bureaucracies. Knack and Keefer (1997) find that trust predicts economic growth and Guiso et al. (2000) find that it predicts financial development. Toqueville (1840, 1981: 137-141) argued that democratic countries that lost the habit of association would find their very civilizations in peril because they had no other substitutes for reciprocal action.

Despite the importance of social capital to society, individuals have few incentives to participate within the community. This free-rider problem may be growing worse over time. Putnam (2000) documents a decline in social and civic engagement in the United States that has alarmed policy makers.

This paper evaluates trends in social capital in the United States since 1952 and finds that the decline in social capital has been over-stated. It assesses explanations for the declines that are observed since the 1970s using a wide array of data sources. It examines both social capital produced outside the home (volunteering, membership in organizations) and social capital produced within the home (entertaining friends and relatives). We examine both types of social

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[1]Estimated from the 1998 General Social Survey.

capital because that produced within the home is important for the social development of children (Loury 1977) and that produced in the community for the provision of public goods.

We investigate the role of rising work hours among women and among the college-educated (two groups that supply many of the nation's volunteer workers (Freeman 1997; Banks and Tanner 1998)) and growing income, racial, and ethnic heterogeneity within communities in the decline in social capital since the 1970s. Putnam (2000) argued that television and the aging of the "civic" generations born between 1910 and 1940 are the primary culprits. We argue that rising community heterogeneity, particularly income inequality, and the rise in women's labor force participation rates are the primary explanations.

2   Empirical Framework

Social capital is embodied in the relations between individuals and organizations. The level of social capital within a community depends on both the demand for and supply of social capital. Supply depends on individuals' willingness to participate in the community and this in turn depends on individuals' socioeconomic and demographic characteristics and on the characteristics of the community.

Micro-economic and demographic change can lead to declines in the supply of social capital, particularly in social capital activities produced largely within the home, such as entertaining, and, to a lesser extent, visits with friends, relatives, and neighbors. As Glaeser, Laibson, and Sacerdote (2000) point out, the market and non-market returns from interactions with others are likely to rise and then fall with age and to depend upon occupation and patience (and therefore upon education). The rise in women's labor force participation could decrease entertainment for pleasure but increase entertainment for business purposes. Increases in work hours by the college educated could have the same effect. Declines in fertility rates since the 1970s could

reduce social capital related to children but increase social capital related to adults. Increases in hours worked by the college-educated may have reduced the available time for volunteer work by highly productive individuals. Because women are disproportionately likely to volunteer (e.g. Freeman 1997), the rise in women's labor force participation may have reduced women's available volunteer time, but increased their membership in professional organizations.[2]

Alesina and LaFerrara (2000; forthcoming), in contrast, emphasize the role of macro-community factors in the production of social capital. Community heterogeneity can decrease community participation because people prefer to associate with others like them. Rising income inequality and growing racial and ethnic fragmentation can therefore decrease social capital, particularly for such social capital activities produced outside the home as volunteer work and organizational membership. Which of these measures of community heterogeneity best predicts social capital trends depends upon both the magnitude of the change in each of these measures and upon whether people measure their distance to others in terms of class, race, or ethnicity. Empirical evidence for the United States has mainly emphasized the role of race in lowering social capital and in the provision of public goods (e.g. Alesina and La Ferrara 2000; Luttmer, forthcoming; Poterba 1997), but there is also evidence of the importance of income inequality and of ethnic fragmentation (Alesina, Baquir, and Easterly 1999; Alesina and La Ferrara 2000, forthcoming; Goldin and Katz 1999).

Social capital may decline because demand falls. If social networks mainly serve an insurance purpose, then as society becomes richer, this need may dissipate. Higher human capital individuals may be more productive volunteers or organization members and therefore in greater demand (Freeman 1997). As organizations become more professionalized, they may prefer cash to volunteers or want only the time of individuals with high opportunities in the private

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[2]Rising geographic mobility is an unlikely explanation because migration across states has declined since the 1950s (see http://www.census.gov).

sector. If non-profits "professionalize," the "warm glow" (Andreoni 1990) from participation may diminish. Finally, the volunteer sector, like others in the economy, may be undergoing skill biased technological change.

We measure social capital using 1) volunteer activity, 2) organizational membership and activity, and 3) entertaining and visits with friends, relatives, and neighbors. After establishing what types of social capital have declined, we test whether declines can be attributed to changes in hours worked, the rise in women's labor force participation rates, and growing community heterogeneity. Our measures of social capital focus mainly on the residential community and on the family. The residential community is important because voting is based upon place of residence, not upon place of work. We recognize that there is social capital in the workplace. However, there cannot be an under-supply of social capital in the workplace because firms with potential agency problems will create a culture of mutual monitoring and social interactions (Kandel and Lazear 1992). We are not measuring the number of social interactions that people have with others. Our goal is to measure inputs in the production of social capital. We examine measures that are likely to be particularly conducive to generating the beneficial effects of social capital, such as the transmission of knowledge and the development of trust.[3]

Our empirical strategy examines how changes in individual and community characteristics affect the time trend in our measures of social capital. We estimate probit equations of the form,

$$\text{Prob}(V_i = 1) = \Phi(Y_i\beta_Y + \beta_f f_i + X_i\beta_X) \tag{1}$$

$$\text{Prob}(V_i = 1) = \Phi(Y_i\beta_Y + \beta_f f_i + Y_i f_i\beta_{fY} + X_i\beta_X) \tag{2}$$

$$\text{Prob}(V_i = 1) = \Phi(Y_i\beta_Y + \beta_f f_i + Y_i f_i\beta_{fY} + H_i\beta_H + X_i\beta_X), \tag{3}$$

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[3]We do not examine voting because voting by itself does not produce social capital. We also do not examine what predicts how much individuals' trust others, because we view trust as an outcome not a choice.

where V_i is an indicator variable equal to one if individual i reported any time spent volunteering, participating in organizations, or visiting family and friends, Y_i is a vector of year dummies, f_i is a dummy equal to one if female, H_i is a vector of community heterogeneity variables, and X_i is a vector of demographic characteristics, such as age, education, race, and marital status. We determine how the coefficients on the year dummies change as we control for differential trends between men and women and for community heterogeneity. Alesina and LaFerrara (2000, forthcoming) used metropolitan area characteristics as their community variables. We use both measures of metropolitan area characteristics and measures of within area metropolitan heterogeneity.

Two caveats are in order. Because we are not estimating labor supply equations we do not explicitly control for individuals' value of time.[4] Note also that community income inequality is potentially endogenous. Frequent volunteering and participation in organizations will lead to lower inequality if social capital improves the opportunities of the relatively poor. We will therefore examine instrumental variable estimates as well.

3 Data

We examine trends in social capital and assess explanations for declines in social capital using an exhaustive list of data sets drawn from studies of the labor force, studies of political participation, social surveys, time use studies, marketing studies, and studies of volunteering.[5] Table 1 summa-

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[4]Banks and Tanner (1998) find that wages have a positive and statistically significant effect on hours volunteered, but no effect controlling for the replacement cost to the charity of volunteers' time.

[5]We do not use the 1957 and 1976 surveys, Americans Views Their Mental Health (Gurin, Veroff, and Feld 1975; Veroff, Douvan, and Kulka 1982). Although the questions asked in both years were exactly the same, the samples are very non-represenative of the population in terms of membership in labor unions (very low) and amount of time spent with family and friends (very high relative to the General Social Survey). We suspect that willingness to answer a survey on mental health increased between 1957 and 1976 and that this might lead to the decrease in membership in non-union organizations and in ties to family and friends observed between 1957 and 1976.

Table 1: Data Sets Used in This Paper

Data set	Variables	Survey Years	MSA Ident-ified	Use T=Trends A=Analysis
American National Election Study	Organization membership	1952, 1972	Y	T,A
Americans' Use of Time	Time visiting friends; at parties	1964-1965, 1985	N	T,A
	Time spent in organizational activity			T,A
Current Population Survey (CPS)	Any volunteer work in past year/week	1974, 1989	Y	T,A
	Hours volunteered in past year (grouped)			T,A
DDB Life Style Survey (DDB)	Frequency entertained in past year	1975-1998	Y	T,A
	Frequency volunteering in past year			T,A
	Frequency family eats dinner together	1977-1998		T
The Five Nation Study	Organization membership	1960	N	T
General Social Survey (GSS)	Frequency spent evening with friends	Selected years	Y	T
	Frequency spent evening with neighbors	1974-1998		T
	Frequency spent evening with relatives			T
	Organization membership			T,A
Giving and Volunteering in the United States (Gallup)	Any volunteer work in past year	biennual 1988-1996	N	T
The NPD Group Time Study Data (NPD)	Time spent volunteering	1992-1999	Y	T
	Time visiting family/friends			T,A
Political Participation in America	Organization membership	1967	N	T
Time Use in Economic and Social Accounts	Time visiting friends; at parties	1975-1976	Y	T,A
	Time spent in organizational activity			T,A

rizes the data sets that we use and provides a brief description of the social capital variables. The Data Appendix provides more complete details.

We examine trends in volunteer activity using data from the United States Bureau of the Census' April 1974 and May 1989 Current Population Surveys (CPS), the annual 1975-1998 DDB Life Style Survey (DDB) produced by DDB Worldwide and used by Putnam (2000), the biennual 1988-1996 Giving and Volunteering in the United States done by the Gallup Organization for the Independent Sector, and the annual 1992-1999 The NPD Group Time Study Data. Because individuals in the latter data set recorded activities during a half hour block in a 24 hour day, we construct a variable indicating whether the individual spent any time volunteering. The other

data sets provide information on an annual basis. We therefore construct a variable indicating whether a person did any volunteer activity in the past 12 months. As noted by Hayghe (1991), the 1990 Giving and Volunteering in the United States (Gallup) reports that about 54 percent of Americans older than 17 report having done some volunteer work during the 12 months prior to the survey, whereas the 1989 CPS reports that only 20 percent of the population over age 15 did some volunteer work in the prior year. Differences in volunteering rates are attributable to differences in survey response rates, in the way each survey was conducted, and in the kinds of questions asked (see the Data Appendix for further details).

We study membership in organizations using political participation studies – the 1952 and 1972 American National Election Study (Campbell, Gurin, et al. 1999; Miller, Miller, et al. 1999), the 1960 Five Nation Study (Almond and Verba 1968), and the 1967 Political Participation in America (Verba and Nie 1976), and using the 1974-1998 General Social Survey (Davis and Smith 1999). The advantage of the General Social Survey (GSS) is that exactly the same questions on membership were asked in each year. For this survey we construct a variable that is equal to one if the individual was a member of any group. Because response rates increased in the GSS (Smith 1994), then, if the less civic minded became more likely to answer the survey, our variable may overstate the decline in membership. For the political participation studies we restrict ourselves to membership in non-church organizations, because of differences in the phrasing of questions across earlier surveys. Such differences are particularly likely to affect reporting of membership in church groups (e.g. church choirs) because of a context effect on membership in church groups (Smith 1990). We analyze the determinants of trends in the earlier surveys using only the 1952 and 1972 American National Election Studies because these are the only surveys to identify metropolitan areas.

We study time spent in an organizational activity using the 1965 and 1985 Americans' Use of Time (Converse and Robinson 1980; Robinson 1993) and the 1975 Time Use in Economic

and Social Accounts (Juster et al. 1979). Our variable consists of whether an individual recorded any time spent in an organizational activity in a 24 hour day. These data also allow us to study time spent in entertainment activity. Our variable is based upon an individual recording in a 24 hour day any time spent 1) entertaining or visiting friends, 2) at a party or reception (with meals) given by or for the respondent, and 3) at a party or reception, without meals, or in other social life. These data sets do not identify metropolitan area. We also use the time diary information in the 1992-1999 NPD data and construct a variable equal to one if the individual recorded any time spent visiting friends or relatives.

We also examine social capital produced inside the home, using data from the GSS and the DDB. From the DDB we construct a dummy variable equal to one if an individual reported that she "entertained people in my home" 12-24 times in the last 12 months and a dummy variable equal to one if an individual agrees with the statement "our whole family usually eats dinner together." These measures proxy for the socialization of children and young adults. From the GSS we construct three dummy variables equal to one if an individual reported that at least several times a month he spent a social evening with relatives, neighbors, and friends, respectively.

We create variables of metropolitan area characteristics from the integrated public use census samples (Ruggles and Sobek 1997) and use metropolitan area measures of sorting by income (Jargowsky 1996) and race (Cutler, Glaeser, Vigdor 1999). Complete details are provided in the Data Appendix. We calculate, by metropolitan area, the Gini coefficient of weekly wages for full-time, full-year men age 21 to 64. We use Jargowsky's (1996) neighborhood sorting index (NSI) as a measure of neighborhood (census tract) income segregation by metropolitan area. The NSI is

$$\text{NSI} = \frac{\sigma_N}{\sigma_H} = \frac{\sqrt{\left(\sum_{n=1}^{N} h_n (\bar{y_n} - \bar{y})^2 / H\right)}}{\sqrt{\left(\sum_{i=1}^{H} (y_i - \bar{y})^2 / H\right)}}$$

where y is income, i indexes households, n indexes neighborhoods, h_n is the number of households in neighborhood n, and H and N are the total number of households and neighborhoods respectively. If all neighborhoods have the same mean income the index takes the value 0 whereas if all households live in neighborhoods with a mean income identical to their own income then the index will equal one. We also calculate racial and birthplace fragmentation indexes. 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. As discussed in the Appendix, our birthplace fragmentation index is similarly constructed. We also use the racial isolation index created by Cutler, Glaeser, and Vigdor (1999), create a variable that is the logarithm of metropolitan area population and a variable that is equal to the average weekly wage for full-time, full-year men age 21 to 64 by metropolitan area, and create variables giving the fraction of the labor force in manufacturing and in the public sector. We use the latter two variables as instruments for the Gini coefficient because inequality is lower the higher the share of the labor force employed in manufacturing and in public administration. We control for metropolitan area because community involvement is lower in major metropolitan areas (Putnam 2000: 206). We control for the average metropolitan area wage because wealthier communities may have less of a need for the insurance component of social capital.

Our other control variables consist of dummies indicating year, sex, whether the individual is white, whether the individual is married, whether the individual is in the labor force (when the dependent variable is not volunteering), age (using 5 year age dummies), education (less than high school, high school, some college, post-college), and 9 regional dummies. When

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possible we control for number of children in the household.

We restrict all data to individuals age 25 to 54 both to obtain a narrower cohort and to focus on individuals in their prime working ages. We restrict all of the DDB data to married individuals because only married individuals were interviewed in the early years of the survey.

4 Trends

4.1 Economic Trends

Micro-economic trends since 1950 in women's labor force participation rates and in weekly hours worked will affect social capital (see Table 2). The labor force participation rate of married women rose from 24 percent in 1950 to 43 percent in 1970 and by 1990 stood at 71 percent. Women's fertility reached a peak in 1970 and then declined sharply. Although average work hours have remained unchanged, the distribution of hours has changed. In 1950 the work week of the college-educated and of those with less than a college education was similar. By the century's end, the college-educated were working the longest work week (see Coleman and Pencavel 1993a, 1993b and Costa 2000).

Time diaries show that the typical day of American men and women has changed considerably since the mid-1960s (see Table 3). In contrast to self-reports, the work hours of men have fallen. Women's work hours have risen, but their combined market and non-market work time fell from 494 minutes in 1965 to 460 minutes in 1985 and also fell in the 1990s. Travel time (whether for work or errands) has remained unchanged, suggesting that increases in sprawl cannot explain declines in social capital. Men's TV watching has been rising, but women's has remained unchanged since 1975, implying that declines in social capital among women since the 1970s cannot be attributed to television. The amount of non-work time spent at work has fallen, suggesting that there has not been substitution of socialization to the workplace from the

Table 2: Trends in Individual Characteristics, 25 to 54 Year Olds, 1950-1999

	1950	1960	1970	1980	1990	1998/99
Women's labor force participation rates (%)						
All	33.3	41.3	49.0	63.1	74.3	77.1
Married	24.2	34.6	43.4	57.9	71.0	74.4
Unmarried	69.9	72.9	71.9	77.2	80.8	81.0
Women						
No own children in household (%)	36.6	29.8	27.8	30.9	36.7	47.4
Number own children in household	1.4	1.7	1.8	1.5	1.2	1.0
Weekly hours of full-time workers						
Men						
Less than high school	47.6	46.4	45.7	44.9	45.2	44.4
High school	47.4	47.3	46.7	45.8	46.6	46.5
College	47.9	47.9	47.5	46.6	47.7	48.7
Women						
Less than high school	44.2	43.4	42.2	41.5	42.4	42.0
High school	43.0	42.6	41.7	41.4	42.4	42.8
College	42.7	43.0	42.6	42.1	43.8	44.9

Women's labor force participation rates and weekly hours are estimated from the integrated public use census samples (Ruggles and Sobek 1997) and for 1998 and 1999 (combined) from the Current Population Surveys. Full-time employment is defined as 35 hours a week or more. Population weights used for 1950, 1990, and 1998/1999.

Table 3: Trends in Time Use (Minutes Per Day), Men and Women Age 25-54, 1965-1999

	Americans' Use of Time			The NPD Group Time Study		
	1965	1975	1985	1992	1995	1999
Men						
Work	381.1	352.6	326.8	365.3	337.4	318.0
At work, non-work	34.18	21.18	14.67			
Travel	87.9	88.7	80.7	62.4	66.6	64.2
Housework	40.1	46.2	77.0	42.4	50.5	46.0
Shopping	27.0	19.5	25.0	16.1	20.1	20.3
Children	13.9	13.5	11.0	19.6	14.1	18.8
Leisure	228.7	242.7	237.4	238.0	242.2	255.4
TV watching	108.5	128.4	136.3	140.0	134.2	151.9
Visits with friends; parties	45.7	37.0	27.0	22.7	26.1	26.1
Personal Care	599.3	612.2	592.5			
Sleep	464.5	484.0	467.8			
Education	5.0	10.1	3.3	7.2	6.0	6.5
Religious practice	3.9	6.5	4.3	9.8	9.5	9.6
Organizational activity	6.0	7.1	5.0			
Volunteering				7.9	10.5	5.3
Other	47.0	54.0	76.9	657.3	675.0	673.7
Women						
Work	141.5	151.3	186.5	190.2	160.5	171.6
At work, non-work	12.52	11.32	9.88			
Travel	62.2	68.5	66.2	49.1	56.4	48.1
Housework	248.2	197.1	166.1	135.7	138.0	126.2
Shopping	42.1	32.6	41.4	41.4	39.1	37.7
Children	57.2	47.7	35.0	39.6	52.8	51.5
Leisure	198.4	232.0	214.9	243.2	236.7	236.0
TV watching	81.1	124.7	117.6	124.3	122.4	129.1
Visits with friends; parties	57.1	43.2	31.6	32.4	27.6	22.9
Personal Care	594.2	616.9	610.1			
Sleep	464.6	499.7	478.6			
Education	2.5	4.5	4.5	7.3	7.1	9.8
Religious practice	3.9	12.8	9.0	11.3	15.3	11.2
Organizational activity	10.3	11.6	7.2			
Volunteering				9.8	11.5	8.1
Other	79.3	65.1	98.9	697.1	713.2	721.0

Estimates are means over a 7 day week.

Table 4: Trends in Metropolitan Area Characteristics, 1950-1990

	1950	1970	1980	1990
Gini coefficient, wages full-time, full-year men	0.239	0.266	0.284	0.333
Neighborhood sorting index		0.332	0.368	0.402
Racial fragmentation	0.162	0.254	0.296	0.282
Fraction black	0.092	0.121	0.125	0.132
Racial isolation index		0.570	0.447	0.384
Birthplace fragmentation	0.187	0.128	0.149	0.191
Fraction foreign born	0.111	0.075	0.087	0.113

Based upon the population weighted mean over all metropolitan areas. The neighborhood sorting index is from Jargowsky (1996) and the racial isoloation index from Cutler, Glaeser, and Vigdor (1999). All other measures are calculated from the integrated public use census samples (Ruggles and Sobek 1997). All identified metropolitan areas are included. Restricting the data to metropolitan areas that are identified in all years does not change the results.

community.

Metropolitan areas have become more fragmented since the 1970s. Wage (and also household income) inequality rose slightly from 1950 to 1970 and then substantially from 1970 to 1990. Racial fragmentation rose sharply between 1950 and 1970, peaked in 1980, and then fell in 1990. Birthplace fragmentation decreased between 1950 and 1970 and then rose back to 1950 levels in 1990 as the fraction of the foreign-born population increased. However, neighborhood sorting by income has increased, implying that within a metropolitan area, communities have become more homogeneous. If rising community heterogeneity leads to declines in social capital, then trends in racial fragmentation predict declines from 1950 to 1970, trends in racial isolation declines from 1970 to 1990, and trends in birthplace fragmentation increases from 1950 to 1970 and declines since 1970. Trends in wage inequality imply that social capital should have fallen from 1970 to 1990, but not necessarily from 1950 to 1970. Because the returns to education and wage inequality increased sharply between 1980 and 1983 (Katz and Murphy 1992), the sharpest declines in social capital are likely to have occurred from the late 1970s to the early 1980s. In contrast, trends in neighborhood sorting by income suggest that social capital should

have increased from 1970 to 1990. If cars and local television and newspapers have effectively expanded the size of people's communities then inequality trends in the entire metropolitan area may be more important predictors of social capital trends than trends in neighborhood measures.

4.2 Social Capital Trends

By some measures social capital has declined and by others it has not. Consider first the trend in the proportion of 25 to 54 year olds volunteering in the past year (see Figure 1). In the CPS the fraction who did any volunteer work in the past year fell from 29 percent in 1974 to 26 percent in 1989. Volunteer rates are higher in the DDB data and show that the fraction of married men and women with any volunteer activity in the past year fell by 3 percentage points in the 1970s, but by 1998 was back at its 1975 level. The Independent Sector survey shows a decline in volunteering in the 1990s, but not from 1988 to 1996. The NPD data show that from 1992 to 1998 the proportion reporting any volunteer activity in a given day remained constant, but fell in 1999. When we examined time spent volunteering conditional on being a volunteer, we found increases in the CPS data and no change in the DDB data.[6]

There have been declines in the proportion of 25 to 54 year olds who are members of organizations (see Figure 2). Membership in non-church organizations fell slightly from 1952 to 1972.[7] The GSS shows that membership in all organizations fell from 77 to 72 percent between 1974 and 1994. The decline in church groups was highest, falling from 40 to 31 percent between 1974 and 1994. Membership in professional groups rose from 15 to 23 percent. The total decline

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[6]Among volunteers participation in church groups was the most common form of volunteer activity in both 1974 and 1989 (for 41 and 36 percent, respectively, of individuals). The second and third most popular volunteer activities were participation in civic and political groups and in recreational groups in 1974 and in school and education groups and civic and political groups in 1989.

[7]As discussed in the Data Appendix, the 1967 survey may overestimate membership relative to the other surveys. All of the political surveys underestimate membership relative to the GSS.

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Figure 1: Fraction of 25-54 Year Olds Volunteering, 1974-1998
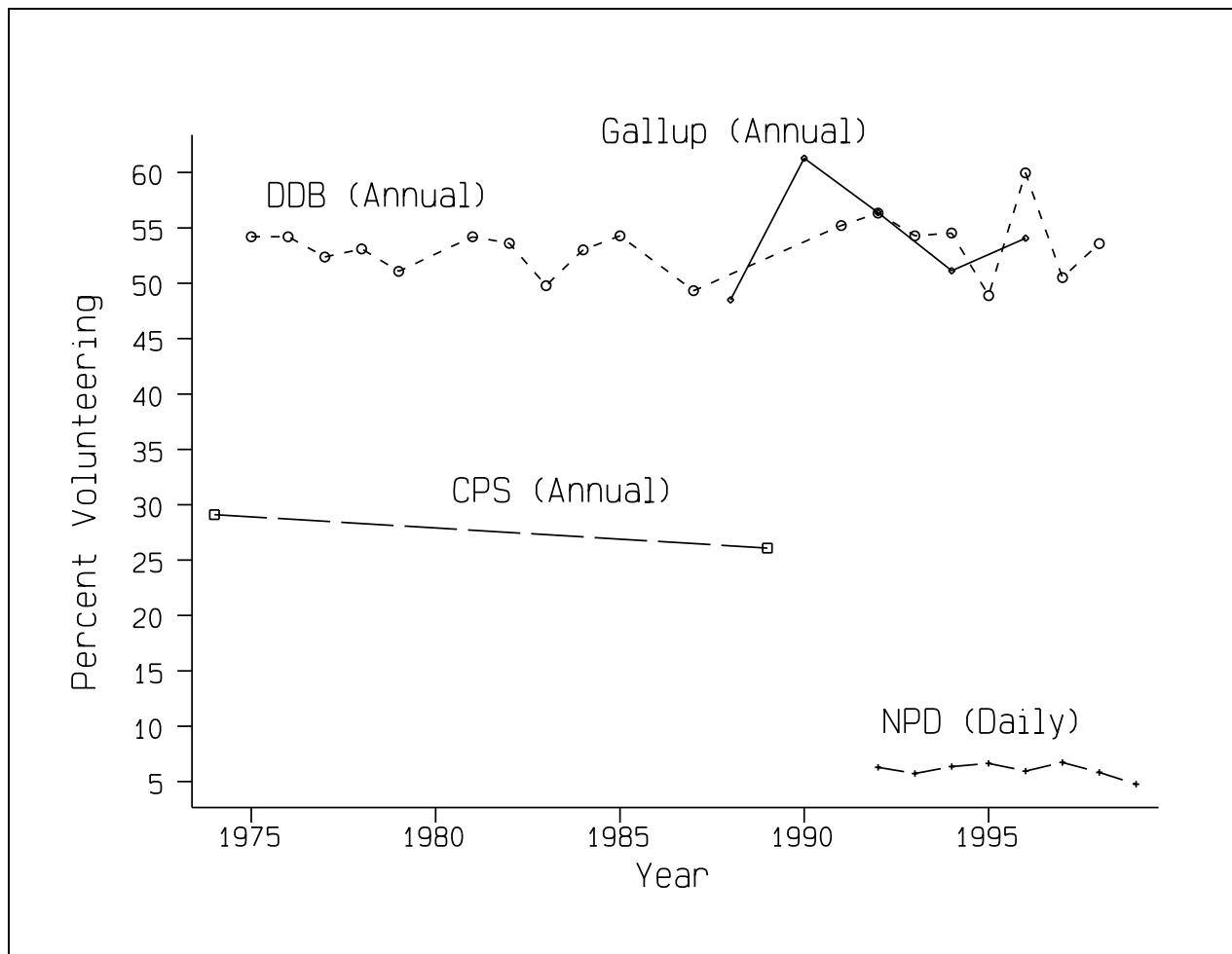
Note. CPS=Current Population Survey, DDB=DDB Needham Life Style Survey, NPD=The NPD Group Time Study Data, Gallup=Giving and Volunteering in the United States, Gallup Organization for the Independent Sector. The CPS, DDB, and Gallup data indicate any volunteer activity in the past year. The NPD data indicate any volunteer activity in the day. The DDB data is restricted to married individuals only.

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Figure 2: Organizational Membership and Activity of 25-54 Year Olds, 1952-1998
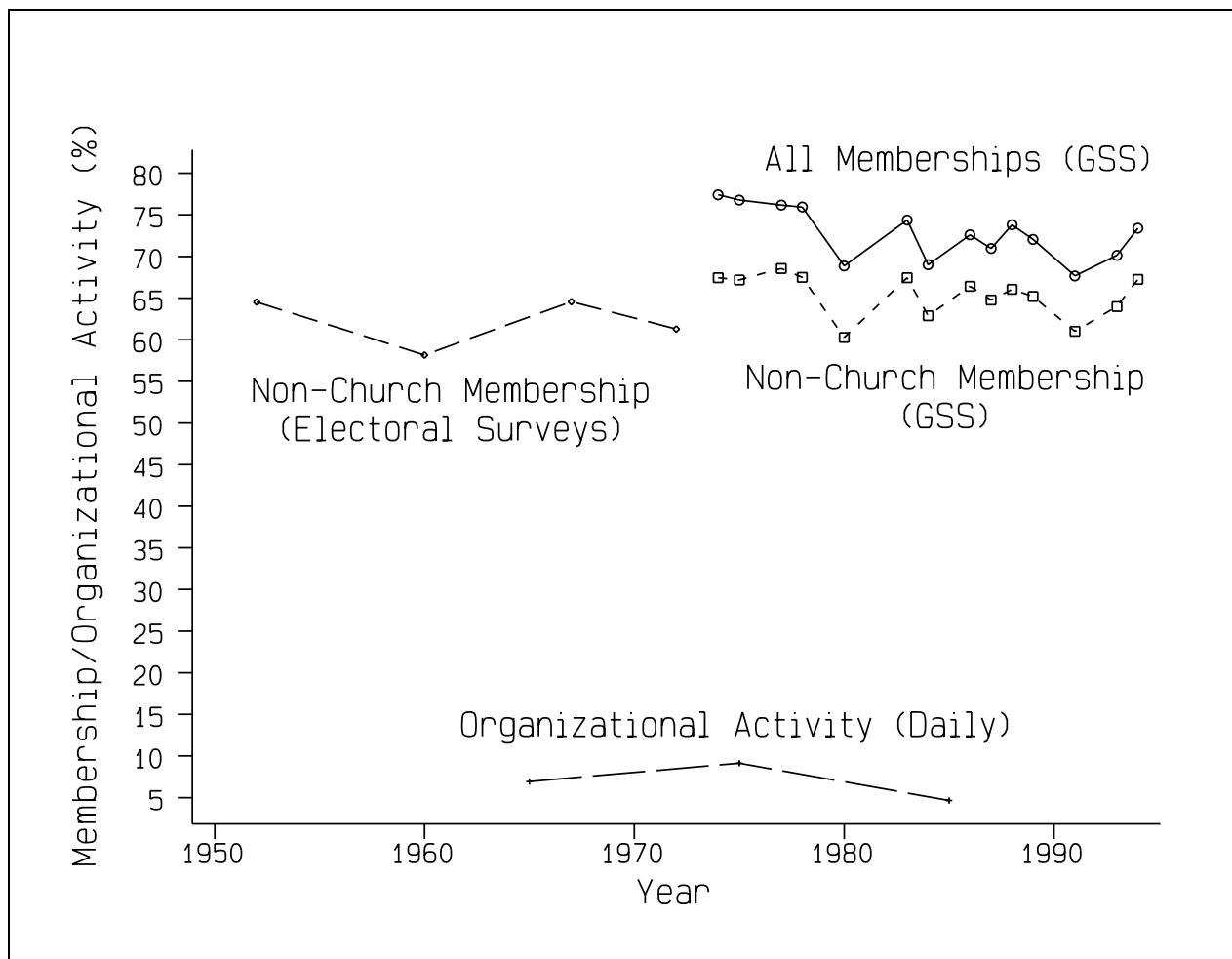
Note. GSS=General Social Survey, 1974-1996. The Electoral Surveys consist of the 1952 and 1972 American National Election Studies, the 1960 Five Nation Study (Almond and Verba 1968), and the 1967 Political Participation in American (Verba and Nie 1967). The 1960 datapoint is for ages 26-50. Organizational Activity indicates whether an individual participated in any organizational activity during one 24 hour day and is from the 1965, 1975, and 1985 time use studies.

in non-church memberships was only 1 percentage point. The fraction reporting spending any time during the day in organizational activity first rose slightly from its level of 8 percent in 1965 but by 1985 fell to 5 percent.

The sharpest declines in social capital are for entertainment and the family eating dinner together (see Figure 3). Among married individuals age 25 to 54 in the DDB data, the proportion reporting that the family eats dinner together fell from 44% in 1977 to 26% in 1998. The fraction reporting entertaining at home at least 12-24 times in the past year fell from 41 percent in 1975 to 20 percent in 1998. The fraction of all men and women in the same age group visiting with friends or going to parties in a 24 hour period fell from 41 percent in 1965 to 27 percent in 1985. The fraction reporting visiting friends or relatives in a 24 hour period in the NPD data fell from 23 percent in 1992 to 21 percent in 1999. The fraction in the General Social Survey reporting spending more than one social evening once a month with neighbors fell from 43 percent in 1974 to 30 percent in 1998. However, there was no decline in the fraction reporting spending a social evening more than once a month with relatives or friends.

5   Results

We have shown that there have been small declines in the proportion of Americans reporting any time spent volunteering or any organizational membership and there have been large declines in the proportion visiting friends and relatives. We now run regressions of the form of Equations 1 through 3 to examine whether these declines persist when we control for basic demographic characteristics, differential trends by education, differential trends by sex, and community heterogeneity.

Figure 3: Percent of 25-54 Year Olds Entertaining/Socializing, 1965-1998
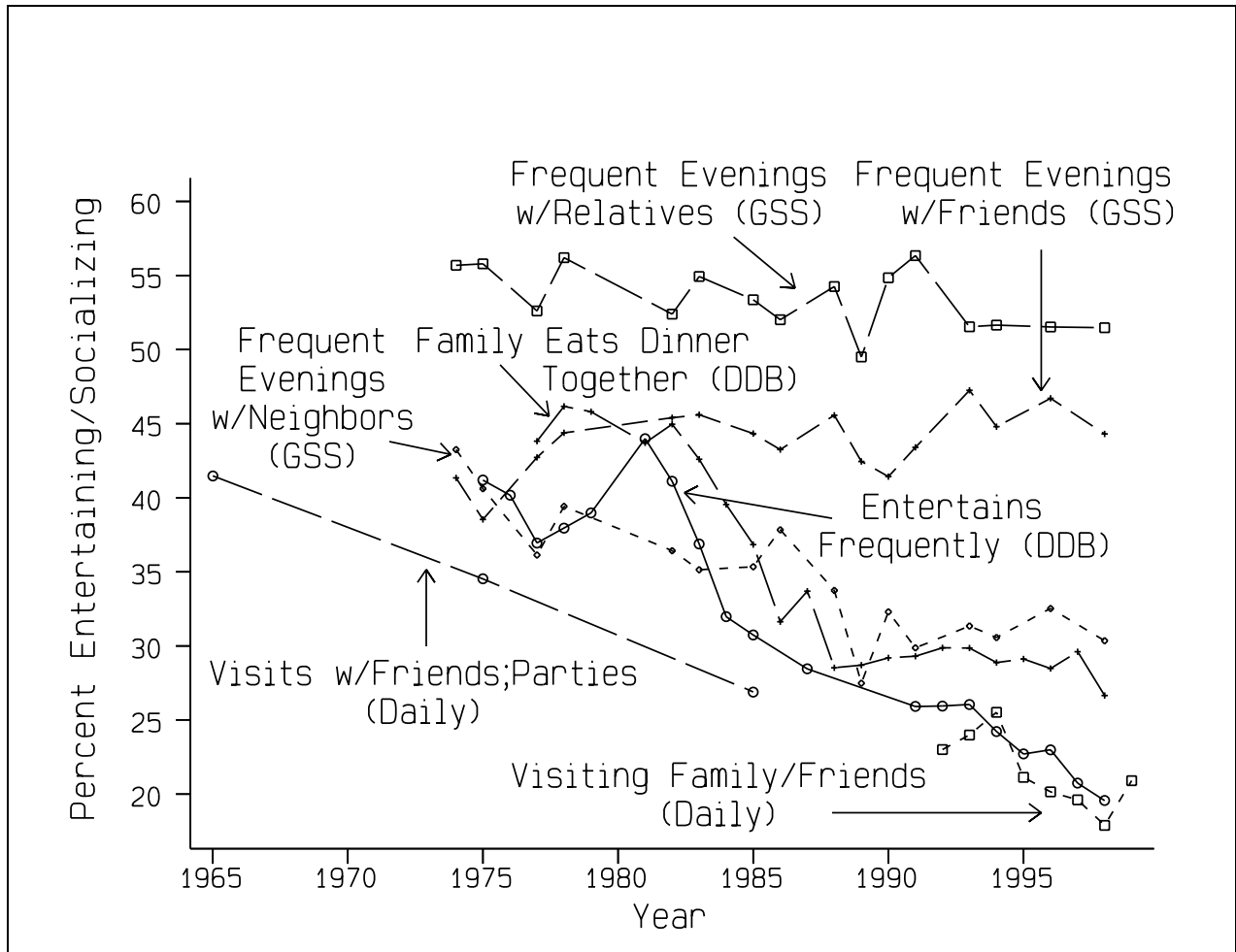
Note. GSS=General Social Survey, 1974-1998. Frequent is defined as several times a month or more. DDB=DDB Life Style Survey, 1975-1998. Entertains frequently is defined as entertained at home 12-24 times in the last 12 months. "Family eats dinner together" indicates the fraction who definitely agree with the statement "our whole family usually eats dinner together." Daily "visits w/friends; parties" and "visiting family/friends" refers to one 24 hour day and could be either at home or away from home visits. Data are from the 1965, 1975, and 1985 time use studies and for 1992-1999 from The NPD Group Time Study Data. The DDB data is restricted to married individuals only.

5.1 Volunteering

Table 5 shows that controlling for demographic characteristics the probability of volunteering fell by 0.05 between 1974 and 1989 and that the decline in volunteering was twice as large among women as among men and disappeared among men and was halved among women once we controlled for metropolitan area wage inequality. When we examined social capital trends by individual characteristics more closely we found that social capital declined only among married women, not among single women. We found no differential trends in social capital by education among men, but among women we found increases among the married college-educated and decreases among the single college-educated. Examining community characteristics more closely showed that neither the neighborhood sorting index nor the racial isolation index affected the time trend, although the latter was statistically significant. A growing metropolitan area employment rate was a statistically insignificant predictor of volunteering and did not affect the trend, suggesting that we are not simply measuring the effects of the business cycle. Instrumenting for Gini with the manufacturing and public administration shares yields similar coefficients, but the standard error on Gini becomes very large and the coefficient statistically insignificant. Although a Hausman test rejected endogeneity ($\chi^2(25) = 0.36$), the results are inconclusive because of the size of the standard error. We also found that conditional on volunteering, time spent volunteering increased controlling for demographic and community characteristics and is not predicted by community characteristics.

The DDB data show that volunteering was statistically significantly higher in the 1970s than in the late 1990s, but that there were no statistically significant differences in metropolitan areas (see Table 6). Neither changing community characteristics nor differential trends by individual characteristics affect the time trend, even though the Gini coefficient was a strong

Table 5: Determinants of Probability Volunteering Among 25-54 Year Olds in the Current Population Survey, 1974-1989

	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	IV $\frac{\partial P}{\partial x}$
Dummy=1 if								
year=1989	-0.049‡	-0.031‡	-0.045*	-0.027‡	-0.003	0.002	-0.014	0.001
	(0.007)	(0.011)	(0.245)	(0.011)	(0.015)	(0.017)	(0.027)	(0.036)
female	0.069‡	0.097‡	0.036	0.098‡	0.098‡	0.098‡	0.038	0.099‡
	(0.004)	(0.012)	(0.029)	(0.012)	(0.010)	(0.011)	(0.028)	(0.006)
married	0.083‡	0.083‡	0.060‡	0.079‡	0.079‡	0.078‡	0.060‡	0.082‡
	(0.004)	(0.004)	(0.023)	(0.006)	(0.006)	(0.006)	(0.023)	(0.004)
Female*year 1989		-0.032†	0.021	-0.032†	-0.032‡	-0.032‡	0.019	-0.032‡
		(0.013)	(0.030)	(0.013)	(0.009)	(0.010)	(0.028)	(0.005)
Married*female			0.078‡				0.078‡	
			(0.034)				(0.033)	
Married*year 1989			0.016				0.011	
			(0.025)				(0.025)	
Married*female*year 1989			-0.062*				-0.060*	
			(0.032)				(0.030)	
Gini coefficient					-0.472†	-0.543†	-0.471†	-0.560
					(0.202)	(0.254)	(0.202)	(0.703)
Racial fragmentation				-0.063‡	-0.052	-0.056	-0.053	-0.049*
				(0.020)	(0.038)	(0.041)	(0.038)	(0.029)
Birthplace fragmentation				-0.237‡	-0.174‡	-0.166‡	-0.175‡	-0.163*
				(0.019)	(0.049)	(0.057)	(0.049)	(0.098)
Neighborhood sorting index						-0.033		
						(0.078)		
Pseudo R²	0.083	0.083	0.083	0.089	0.089	0.090	0.089	0.088

42,134 observations. Data for 1974 and 1989 are pooled and are restricted to individuals in identified MSAs. Robust standard errors in parentheses. The symbols ∗, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is a dummy equal to one if the individual did any volunteer work in the past 12 months. Additional control variables include 5 year age dummies (with age 35-40 as the omitted variable), a dummy indicating that race is white, education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (New England is omitted). We cannot control for the number of children in the household. Community heterogeneity measures are interpolated from the 1970 and 1980 censuses for the 1974 sample and are from the 1990 census for the 1989 sample. Controlling for MSA population and for the average MSA wage did not change the results. In the rightmost column IV results are reported. Instruments were the share of workers in manufacturing and in public administration. Estimation was by means of Amemiya's Generalized Least Squares estimates for probits with endogenous variables using the formulas in Newey (1987). The first stage results yield an R^2 of 0.692 with a coefficient on manufacturing share of -0.142 ($\hat{\sigma} = 0.002$) and a coefficient on public administration share of -0.185 ($\hat{\sigma} = 0.002$).

Table 6: Determinants of Probability Volunteering Among Married 25-54 Year Olds in the DDB Life Style Study, 1975-1998

	All		MSA Only			
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year						
1975-79	0.027‡	0.010	0.002	-0.019	-0.045‡	-0.058‡
	(0.008)	(0.009)	(0.011)	(0.013)	(0.015)	(0.013)
1980-84	0.014	0.002	-0.014	-0.044†	-0.082‡	-0.123‡
	(0.011)	(0.012)	(0.017)	(0.021)	(0.029)	(0.030)
1985-89	-0.007	-0.004	-0.007	-0.034*	-0.070‡	-0.095‡
	(0.014)	(0.015)	(0.019)	(0.021)	(0.027)	(0.028)
1990-94	0.012	0.013	0.010	0.008	-0.024	-0.037
	(0.013)	(0.013)	(0.017)	(0.016)	(0.022)	(0.025)
1995-98						
Gini coefficient				-0.478‡	-0.539‡	-0.625‡
				(0.191)	(0.185)	(0.190)
Racial fragmentation			-0.180‡	-0.129‡	-0.097*	-0.009
			(0.037)	(0.044)	(0.054)	(0.056)
Birthplace fragmentation			-0.048	-0.011	0.006	-0.016
			(0.042)	(0.045)	(0.050)	(0.043)
Neighborhood segregation index					-0.087	
					(0.087)	
Log(MSA population)					-0.015‡	
					(0.005)	
Pseudo R^2	0.042	0.041	0.042	0.042	0.045	0.044

35,845 observations in the entire dataset and 32,577 when MSA is identified. Robust standard errors in parentheses. The symbols *, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is whether the individual did any volunteer work in the past 12 months. The fragmentation measures and the neighborhood segregegation index for 1970, 1980, and 1980 were used for the decades of the 1970s, 1980s, and 1990s, respectively. The Gini coefficient is an annual measure. It was interpolated across census years and predicted for the 1990s. Additional control variables include a dummy equal to one if there are children at home under age 18, 5 year age dummies (with age 35-40 as the omitted variable), a dummy indicating that race is white, education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (New England is omitted). The DDB data is restricted to married individuals and is weighted using the population weights.

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predictor of volunteering.[8] We cannot detect a trend in the NPD data even controlling for demographic characteristics.

The Gini coefficient was the community characteristic that best predicts volunteering among those age 25 to 54, but among those older than 64 birthplace fragmentation was the best predictor in both the CPS and the DDB. Although it did not affect volunteering trends, ethnic fragmentation may be more important to seniors. Controlling for demographic characteristics, there was no statistically significant change in the CPS in seniors' probability of volunteering and in the DDB volunteering first increased in the 1980s and early 1990s and then decreased.

5.2   Memberships

We predicted that because wage inequality rose only slightly between 1952 and 1972, membership trends should remain unchanged. We found that this was true for non-church membership in metropolitan areas (see Table 7). In metropolitan areas racial fragmentation was the only community characteristic that was a statistically significant predictor of membership, but membership increased (though not statistically significantly) despite sharply rising racial fragmentation. The effect of the Gini coefficient was large, but statistically insignificant.

Since the 1970s rising income inequality and growing birthplace fragmentation have been the primary determinants of declining organization membership controlling for education (see Table 8).[9] The Gini coefficient and birthplace fragmentation combined decreased the coefficients on the year dummies for 1984-89 and 1990-4 from -0.07 to -0.05 and from -0.11 to

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[8]When we instrument for Gini we obtain a large but statistically insignificant coefficient of -0.770 but the time trend remains unchanged.

[9]Not controlling for education leads to somewhat smaller declines. Examining only non-church membership yields smaller but still significant declines. Excluding union membership does not affect the magnitude of the decline.

Table 7: Determinants of Non-Church Membership Among 25-54 Year Olds, American Election Studies, 1952-1972

	All		MSA Only	
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year=1972	-0.056[†]	-0.000	0.025	0.041
	(0.029)	(0.041)	(0.051)	(0.072)
Gini coefficient				-0.594
				(1.424)
Racial fragmentation			-0.481[†]	-0.450[†]
			(0.209)	(0.214)
Birthplace fragmentation			-0.144	-0.109
			(0.191)	(0.196)
Pseudo R^2	0.099	0.092	0.097	0.098

1,860 observations in the entire data set. 1,027 observations in the MSA only data set. Robust standard errors in parentheses. The symbols $*$, $†$, and $‡$ indicate significance at the 10, 5, and 1 percent level, respectively. The community heterogeneity measures are estimated from the 1950 and 1970 integrated public use census sample (Ruggles and Sobek 1997). The dependent variable is equal to one if the individual was a member of any non-church organization. Additional control variables include four dummies equal to one if the individual is married, female, or white, 5 year age dummies (with age 35-40 as the omitted variable), education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (New England is omitted). Controlling for metropolitan area population and for average metropolitan area wage did not change the results.

Table 8: Determinants of Membership among 25-54 Year Olds, General Social Survey, 1974-1994

	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy if 1 if year is					
1974-79					
1980-84	-0.085[‡]	-0.087[‡]	-0.085[‡]	-0.078[‡]	-0.088[‡]
	(0.013)	(0.017)	(0.016)	(0.017)	(0.018)
1984-89	-0.072[‡]	-0.069[‡]	-0.063[‡]	-0.048[‡]	-0.054[‡]
	(0.013)	(0.014)	(0.015)	(0.016)	(0.016)
1990-94	-0.105[‡]	-0.097[‡]	-0.084[‡]	-0.063[‡]	-0.075[‡]
	(0.017)	(0.018)	(0.020)	(0.022)	(0.023)
Gini coefficient			-0.395		
(interpolated across years)			(0.321)		
Gini coefficient				-0.540[*]	-0.587[†]
(by decade)				(0.287)	(0.284)
Racial fragmentation		0.047	0.061	0.069	0.005
		(0.052)	(0.052)	(0.052)	(0.053)
Birthplace fragmentation		-0.258[‡]	-0.210[‡]	-0.173[‡]	-0.172[‡]
		(0.046)	(0.061)	(0.003)	(0.056)
Neighborhood sorting index					0.164[*]
					(0.089)
Pseudo R^2	0.079	0.083	0.083	0.083	0.084

7,230 observations. Data are restricted to known MSAs only. Robust standard errors in parentheses. The symbols *, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is equal to one if the individuals reported membership in any organization. Additional control variables include four dummies equal to one if the individual is married, female, or white, 5 year age dummies (with age 35-40 as the omitted variable), education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (New England is omitted). Controlling for MSA population and for average MSA wage did not change the results. The GSS is weighted using population weights.

-0.08, respectively.[10] Membership declined sharply in the early 1980s relative to the 1970s, 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 of professional organizations, suggesting that when interpersonal contact is high, people prefer to be with others like them. Neighborhood sorting had little effect on membership trends. Among Americans older than 64 we found that again birthplace fragmentation was the only community characteristic that statistically significantly predicted membership but that there was no statistically significant change in membership since the 1970s. When we examined trends by individual characteristics we found no differential trend between women and men or the college-educated and those with less than a college education. However, when we restricted the sample to women we found a statistically significant and substantial increase in membership among the college-educated, largely because of an increase in professional memberships.

The time use diaries provide evidence that the rise in women's labor force participation rates has reduced time spent in organizational activity (see Table 9). When the sample was restricted to men, we found no evidence of a time trend. When we restricted to women we found that the probability of spending time in organizational activity first rose by 0.02 between 1965 and 1975 and then fell by 0.063 by 1985. We also found that being in the labor force was a statistically significant, negative predictor of membership. Most of the decline in membership was observed among non-working women, but this may reflect selection or the shift of memberships from community-oriented to workplace-oriented.

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[10]When we instrumented for Gini we obtained an insignificant coefficient of -1.607.

Table 9: Determinants of Probability Spending Time in Organization Activity Among 25-54 Year Olds, Time Use Studies, 1965-1985

	All		Men	Women
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year is				
1965				
1975	0.012	0.003	0.000	0.019
	(0.012)	(0.019)	(0.016)	(0.019)
1985	-0.044‡	-0.028*	-0.021	-0.063‡
	(0.012)	(0.017)	(0.012)	(0.018)
Dummy=1 if female	0.025	0.035†		
	(0.007)	(0.016)		
Female*year 1975		0.013		
		(0.026)		
Female*year 1985		-0.021		
		(0.017)		
Pseudo R^2	0.052	0.054	0.035	0.062

3,816 total observations. 1,704 observations on men. 2,112 observations on women. The symbols $*$, $\dagger$, and $\ddagger$ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is equal to one if the individuals reported any time spent in organizational activities in a 24 hour day. Additional control variables include three dummies equal to one if the individual is married, lives in a standard metropolitan area, or reported hours on a weekend, the number of children in the household, 5 year age dummies (with age 35-40 as the omitted variable), and education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable). It was not possible to control for race or region.

5.3 Entertaining and Visiting

Among married 25 to 54 year olds the probability of entertaining at home at least 12 to 24 times in the past year fell sharply between 1975 and 1998, with the largest declines among women (see Table 10). When we restricted the sample to women then we found that the biggest declines have occurred among women who are in the labor force. Among Americans older than 64 there was also a decline in the probability of entertaining, but there were no statistically significant differences between men and women. As expected, community characteristics (with the exception of a positive and significant sign on birthplace fragmentation) were statistically insignificant and did not affect the trend. When we examined the probability of the family eating dinner together we found no differential trends by sex nor by labor force status among women nor any effect of community characteristics on the time trend

The time use studies also reveal differential trends between men and women in time spent visiting (see Tables 11 and 12). Between 1965 and 1975 the probability of visiting friends or being at parties fell by 0.10 among women but by only 0.05 among men. Between 1965 and 1985 the probability among women fell by 0.25 and among men by 0.13. The 1965 to 1985 decline between men and women was statistically significantly different. However, unlike the DDB data, the 1965-1985 time diaries show that the biggest decline occurred among non-working women. Selection is a potential explanation. Compared to 1992 women's probability of visiting friends or relatives was substantially (and statistically significantly) lower in each year after 1995, whereas men experienced little change. There was no differential trend by labor force participation status among women. Among Americans older than 64 there were no statistically significant changes in the probability of visiting friends and relatives in the 1990s.

Using the GSS we found that controlling for demographic characteristics there was no decline in men's or women's probability of spending a social evening with friends or relatives at least several times a month. (These findings do not necessarily contradict those from the

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Table 10: Determinants of Entertaining Frequently at Home Among Married 25-54 Year Olds, DDB Life Style Study, 1975-1998

	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year is 1975-79			
1980-84	0.003	0.010	-0.015
	(0.010)	(0.013)	(0.013)
1985-89	-0.077‡	-0.078‡	-0.087‡
	(0.012)	(0.015)	(0.015)
1990-94	-0.111‡	-0.088‡	-0.086‡
	(0.010)	(0.013)	(0.015)
1995-98	-0.168‡	-0.144‡	-0.133‡
	(0.007)	(0.010)	(0.012)
Dummy=1 if female	0.068‡	0.085‡	0.088‡
	(0.005)	(0.010)	(0.010)
Female*year 1980-84		-0.011	-0.011
		(0.014)	(0.014)
Female*year 1985-89		0.003	0.003
		(0.019)	(0.019)
Female*year 1990-94		-0.046‡	-0.046‡
		(0.015)	(0.015)
Female*year 1995-98		-0.053‡	-0.053‡
		(0.015)	(0.015)
Gini coefficient			-0.207
			(0.153)
Racial fragmentation			-0.048
			(0.031)
Birthplace fragmentation			0.157‡
			(0.035)
Pseudo R^2	0.030	0.031	0.031

Restricted to individuals in MSAs. 32,577 observations. Robust standard errors in parentheses. The symbols *, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively. The fragmentation measures calculated from the 1970, 1980, and 1990 census were used for the decades of the 1970s, 1980s, and 1990s, respectively. The Gini coefficient is an annual measure. It was interpolated across census years and predicted for the 1990s. The dependent variable is equal to one if the individual reported entertaining at home at least 12-24 times in the last 12 months. Additional control variables include a dummy equal to one if there are children at home under age 18, 5 year age dummies (with age 35-40 as the omitted variable), a dummy indicating that race is white, education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (New England is omitted). The DDB data is restricted to married individuals only. All regressions are weighted using population weights. Controlling for MSA size did not change the results.

Table 11: Determinants of Probability Spending Time Visiting or at Parties, Among 25-54 Year Olds, Time Use Studies, 1965-1985

	All		Men	Women
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year is				
1965				
1975	-0.076‡	-0.042	-0.047	-0.097‡
	(0.024)	(0.038)	(0.034)	(0.033)
1985	-0.196‡	-0.135‡	-0.129‡	-0.246‡
	(0.024)	(0.034)	(0.036)	(0.032)
Dummy=1 if female	0.072‡	0.174‡		
	(0.016)	(0.034)		
Female*year 1975		-0.063		
		(0.047)		
Female*year 1985		-0.098†		
		(0.039)		
Pseudo R^2	0.049	0.050	0.066	0.038

3,816 total observations. 1,704 observations on men. 2,112 observations on women. The symbols ∗, †, and ‡ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is equal to one if the individual reported any time spent visiting friends or at parties. Additional control variables include three dummies equal to one if the individual is married, lives in a standard metropolitan area, or reported hours on a weekend, the number of children in the household, 5 year age dummies (with age 35-40 as the omitted variable), and education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable). It was not possible to control for race or region.

Table 12: Determinants of Probability Spending Time Visiting Family or Friends, Among 25-54 Year Olds, The NPD Group Time Study Data, 1992-1999

	All		Men	Women
	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$	$\frac{\partial P}{\partial x}$
Dummy=1 if year is				
1992				
1993	0.006	0.023	0.023	-0.007
	(0.013)	(0.019)	(0.018)	(0.019)
1994	$0.027^\dagger$	$0.058^\ddagger$	$0.056^\ddagger$	0.003
	(0.013)	(0.020)	(0.019)	(0.019)
1995	-0.014	0.001	0.003	-0.027
	(0.013)	(0.019)	(0.018)	(0.018)
1996	$-0.026^\dagger$	0.003	0.004	$-0.053^\ddagger$
	(0.012)	(0.019)	(0.018)	(0.017)
1997	$-0.032^\ddagger$	-0.010	-0.008	$-0.054^\ddagger$
	(0.012)	(0.018)	(0.017)	(0.017)
1998	$-0.046^\ddagger$	-0.034^*	-0.031^*	$-0.060^\ddagger$
	(0.012)	(0.018)	(0.017)	(0.017)
1999	-0.023^*	0.006	0.008	$-0.053^\ddagger$
	(0.013)	(0.019)	(0.018)	(0.017)
Dummy=1 if female	$0.043^\ddagger$	$0.069^\ddagger$		
	(0.007)	(0.018)		
Female*year 1993		-0.033		
		(0.024)		
Female*year 1994		$-0.052^\dagger$		
		(0.022)		
Female*year 1995		-0.031		
		(0.024)		
Female*year 1996		$-0.055^\dagger$		
		(0.022)		
Female*year 1997		-0.044^*		
		(0.023)		
Female*year 1998		-0.027		
		(0.025)		
Female*year 1999		$-0.055^\dagger$		
		(0.022)		
Pseudo R^2	0.016	0.016	0.019	0.014

16,128 observations. 7,965 men and 8,163 women. The symbols $*$, $\dagger$, and $\ddagger$ indicate significance at the 10, 5, and 1 percent level, respectively. The dependent variable is equal to one if the individual reported any time spent visiting friends or family members. Additional control variables include dummies equal to one if the individual is married, lives in a metropolitan area, is white, is hispanic, moved recently, or has children under 18 in the household, 5 year age dummies (with age 35-40 as the omitted variable), education dummies (less than high school, high school, some college, college, post-college, with less than high school as the omitted variable), and 9 regional dummies (with New England as the omitted dummy).

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time diaries – the phrasing of the questions in the time diaries may have led some to only count entertainment at home.) There was a significant decline in both men's and women's probabilities of spending a social evening with a neighbor at least several times a month, but this could neither be explained by differential trends between men and women or between the college-educated and the less than college-educated nor by rising metropolitan area heterogeneity. Our findings of no decline in the probability of spending a social evening with a friend suggests that although formal entertainment in the home has fallen, men and women still maintain contact with their friends.

5.4   Summary

We have shown that where there have been declines in social capital controlling for education, rising community heterogeneity (particularly income inequality) explains the decline in social capital produced outside the home whereas the rise in women's labor force participation rates explains the decline in social capital produced in the home. Sixty-four percent of the decline in the predicted probability of volunteering between 1974 and 1989 was due to the decline among women and 36 percent to the decline among men, suggesting that women's rising labor force participation rates account for 28 percent of the predicted decline. Rising income inequality accounts for all of the decline among men and half of the predicted decline among women. Rising birthplace fragmentation explains 18 percent of the predicted decline in membership from 1974 to 1994 and rising income inequality another 20 percent. The remaining 62 percent was unexplained. Although women's rising labor force participation rates do not explain trends in membership, they account for roughly 65 percent of the decline in time spent in organizational activity between 1965 and 1985. (The remaining 35 percent was unexplained.) Fifty-nine percent of the predicted decline in entertaining frequently at home between 1975 and 1998 was due to women and 41 percent was due to men. About 70 percent of the predicted daily decline in spending time visiting friends or at parties between 1965 and 1985 was due to women and 30

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percent was due to men and all of the predicted daily decline in visiting friends or relatives in the 1990s was due to women. Women's rising labor force participation rates therefore explain 18 to 100 percent of the predicted declines. We could not explain the predicted decline in spending a social evening with a neighbor nor the predicted decline in time spent with children. We found no evidence that growing sprawl, television, or increases in work hours by the college-educated played any role in the decline.

Why do our results differ from those of Putnam (2000)? Putnam concluded that up to half of the decline in social capital controlling for education was due to the aging of the civic generation and up to one quarter to television. We presented results by year not by cohort because our datasets span such different years. When we examined the probability of volunteering at age 34 to 48 in the CPS, we found that controlling for demographic characteristics and education the probability of volunteering was lower by 0.08 among the cohort born 1941 to 1955 compared to members of the civic generation born 1926 to 1940. Once we controlled for rising income inequality, this decline was halved. Averaging over our measures of social capital centered in the community we attribute roughly one third of the predicted decline to women's increased labor force participation rates and one half to growing community heterogeneity. Averaging over our measures of social capital centered in the home we find that the rise in women's labor force participation rates explains 40 percent of the predicted decline. The aging of the civic generation and television could therefore account for at most 22 to 60 percent of the decline. The exact decomposition depends upon the type of social capital that is examined and upon the data sources used.

6 Conclusion

We have examined trends in social capital produced both inside the community and inside the home and have found that since the 1970s there have been small declines in the probability of volunteering, larger declines in the probability of being a member of a group, and still larger declines in the probability of entertaining at home. There have been no declines in the probability of spending frequent evenings with friends or relatives, but time diaries suggest that the probability of visiting friends or relatives has fallen. We argued that the most important explanation for declines in social capital centered in the home was the growth of women's labor force participation whereas the most important factor explaining the decline in social capital centered in the community was rising income inequality, but that growing ethnic heterogeneity and growing women's labor force participation rates played roles as well.

Our findings have implications not just for the United States, but for other countries as well. Both high income inequality and low ethnic homogeneity predicts low membership across western European countries (see Figure 4). The fraction of the population participating actively in a group is very high in such countries as Norway, Sweden, and Finland, and Germany, all of which have relatively low income inequality and high ethnic homogeneity. Although membership rates have been rising in most western European countries, our findings suggest that in the future they will fall. Immigration into western Europe from eastern Europe and from developing countries has increased. As labor markets become more competitive income inequality may rise in Europe as well.

How concerned should we be about declines in social capital? The macro-economic consequences of low social capital levels to countries have been extensively documented (e.g. La Porta et al. 1997, Knack and Keefer 1997, Easterly and Levine 1997, Guiso et al. 2000). The absence of social capital may explain why redistribution is lower in more heterogeneous

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Figure 4: Participation and Income Inequality and Ethnic Homogeneity Across Western Europe, 1981-1997
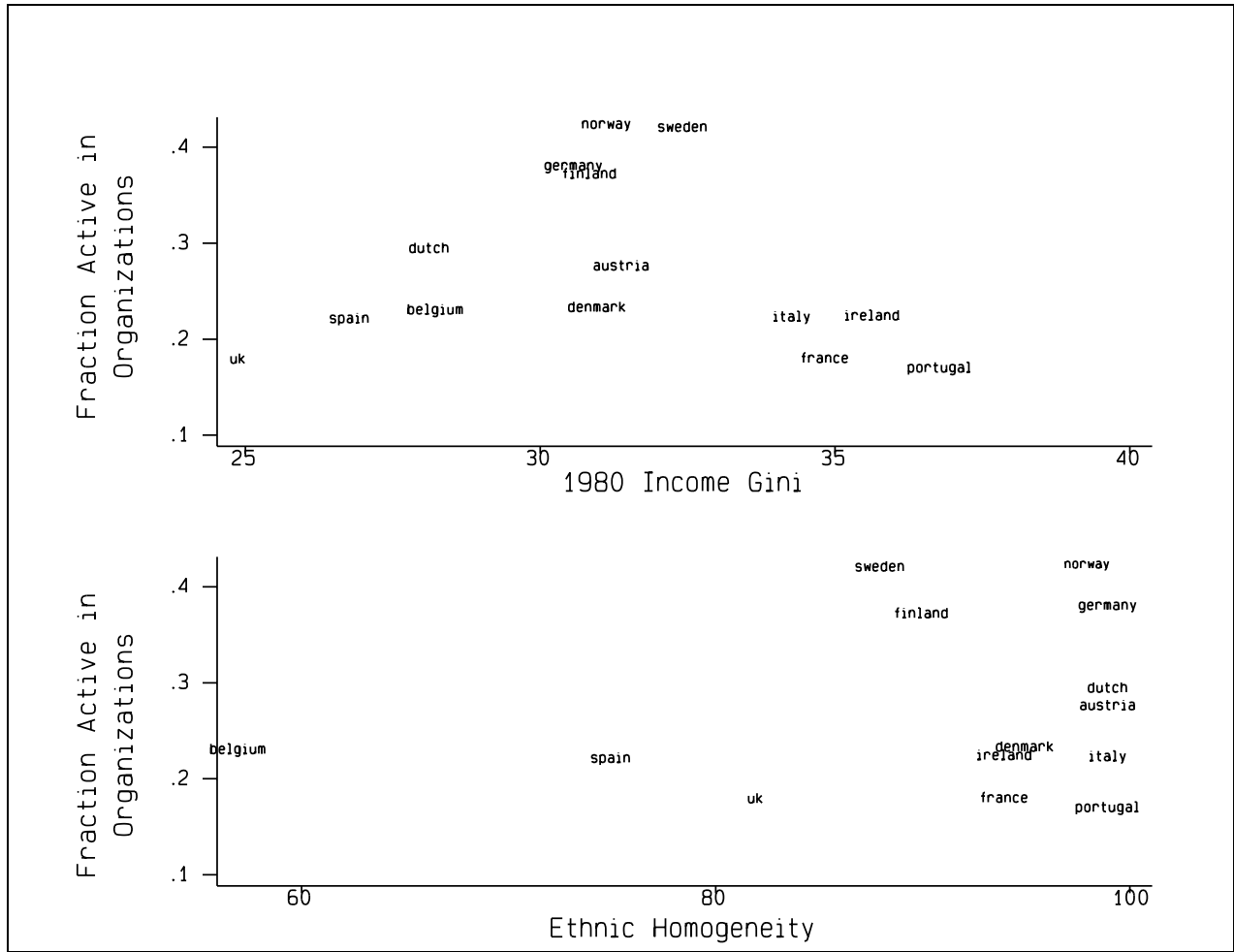
Note. Estimated from *World Values Surveys and European Values Surveys, 1981-1984, 1990-1993, 1995-1997* (Inglehart et al. (2000)). Participation rates are for all adults and are averaged across all survey years. The Gini coefficients are from *Measuring Income Inequality: A New Database* (Deininger 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).

communities (Poterba 1997; Luttmer, forthcoming). Communities may therefore face declines both in time and money inputs. In this case, even if money and time were perfect substitutes in the production of public goods, there would be little possibility of "offsetting" the lost social capital using public funds.

Data Appendix

This appendix describes both our social capital variables, our community heterogeneity variables, and our demographic variables. Details on the wording of the questions are available in the NBER Working Paper 8295.

Social Capital Variables

1. *Volunteering*. Our volunteering variable is a dummy equal to one if the individual did any volunteer work in the past 12 months. As previously noted, differences in volunteering rates arise from differences in response rates, survey methodology, and the types of questions asked. Response rates in the Current Population Survey in 1974 and 1989 were roughly 95 percent (see *Handbook of Labor Statistics*.) In contrast, response rates to the Gallup survey were roughly 20 percent.[11] Surveys other than the CPS may overstate the extent of volunteering because only more civic minded individuals may be willing to answer questions that do not come from the Census Bureau. The CPS may underestimate the extent of volunteering because the CPS used proxy respondents (who were significantly less likely to report volunteer activity than respondents representing only themselves), because of uncertainty on the part of respondents as to precisely what types of activities were volunteer activities, and because the question may have been insufficiently detailed to prompt recall of marginal or infrequent volunteer activity (Hayghe 1991).

2. *Membership*. Our membership variable consists of non-church membership in the political participation studies and of all membership in the GSS. We examine only non-church membership in the political participation studies because of differences in phrasing (e.g. membership in a church choir may be treated as membership in a church-affiliated group, but not in a church or religious group) and because there is some evidence of a context effect on church membership in the GSS (Smith 1990). When we compare membership in unions in the GSS and the political participation surveys, we find that the GSS most closely matches data on union membership from the Bureau of Labor Statistics and from the Current Population Survey. The 1952 and 1972 National Election Studies follow the trend closely, but underestimate union membership. The 1967 survey is off of the trend line.

3. *Daily Activities*.

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[11]Personal communication from the Independent Sector. The other surveys have better response rates. Response rates to the DDB was roughly 70 to 80 percent (Putnam 2000: 421) and those to the NPD were roughly 60 percent (personal communication from The NPD Group).

(a) *Americans' Use of Time, 1954-1965, 1985* and *Time Use in Economic and Social Accounts*

Our constructed organizational activity variable is based upon whether an individual records any minutes spent in 1) participating as member of a party, union, etc.; 2) voluntary activity as an elected official of an organization; other organizational participation; 3) volunteer work for a civic purpose; 4) participating as member of a religious club; 5) participating in factory or worker's councils or committees (union-management); 6) participating in other organizations (family, parent, military, etc.); and, 7) other. We do not include religious practice or attending church services or ceremonies in our definition. Our entertainment activity variable is based upon 1) entertaining friends or visiting friends, 2) party or reception (with meals) given by or for R, and 3) party or reception, without meals; other social life.

(b) *The NPD Group Time Study Data, 1992-1999.*

Our volunteering variable is based upon whether an individual records in any half hour interval that time spent in volunteer work was the primary activity. Our entertainment variable is based upon time spent visiting family/friends.

4. *Entertaining and Socializing.* Our constructed variable of high frequency in entertaining in the DDB is based upon whether an individual reported that he or she "entertained people in my home" 12-24 times in the last 12 months. Our constructed variable of family eats dinner together in the DDB is based upon the whether an individual reported that "our whole family usually eats dinner together." Using the GSS we constructed variables equal to one if an individual reported spending several times a month or more 1) spending a social evening with relatives, 2) spending a social evening with a neighbor, 3) spending a social evening with a friend who lives outside the neighborhood.

Metropolitan Area Characteristics

1. *Gini coefficient.* We calculated, by metropolitan area and census year, the gini coefficient of weekly wages of men age 21 to 64 working at least 35 hours a week in the census week and at least 52 weeks a year in the past year. Weekly wage is estimated as last year's income divided by the number of weeks worked in the past year.

2. *Racial fragmentation.* We calculated, by metropolitan area and census year, the fraction of whites, blacks, American Indians, asians, and other.

3. *Birthplace fragmentation.* 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.

4. *Manufacturing and Public Administration Shares.* We calculate, by metropolitan area and census year, the fraction of the labor force employed in manufacturing and in public administration and use these variables as instruments for the Gini coefficient. and man

5. *Neighborhood Sorting Index.* We use Jargowsky's (1996) measures of income segregation by neighborhood within metropolitan areas.

6. *Racial Isolation Index.* We use Culter, Glaeser, and Vigdor's (1999) measures of racial isolation neighborhood within metropolitan areas.

The first four metropolitan area characteristics are estimated from the Integrated Public Use Census Samples for 1950, 1970, 1980, and 1990 (Ruggles and Sobek 1997).

Demographic Variables

1. *Education.* Education refers to highest level of education completed.

2. *Marital status.* In *DDB Life Style Survey* only married individuals were questioned prior to 1985. Because information is not provided on marital status in 1986, 1988, 1989, and 1990 those years are excluded from the analysis.

3. *Age.* Age is generally given as age in years. It is intervalled in the 1960 *Five Nation Study* (18-25, 26-30, 31-35, 36-40, 41-50, 51-60, and 60+) and 1992-1992 *The NPD Group Time Study* (Under 25, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-64, 65+).

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