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Job Displacement and Social Participation over the Lifecourse: Findings for a Cohort of Joiners

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Abstract

We examine the effects of job displacement, an involuntary event associated with socioeconomic and psychological decline, on social participation. Using more than 45 years of panel data from the Wisconsin Longitudinal Study, we find that job displacement is associated with significant, long-term lower probabilities of subsequent involvement with various forms of social participation for workers displaced during their prime earnings years; displacement is not associated with lower probabilities of involvement for workers displaced in the years approaching retirement. We also find that post-displacement socioeconomic and psychological decline explain very little of the negative effect of job displacement on social participation, and that a single displacement event, rather than a series of multiple displacement events, is most strongly associated with lower probabilities of social involvement.

Americans' commitment to social participation has been a defining feature of the cultural fabric of the United States. Tocqueville (1960[1835]) wrote: "Nothing in my view deserves more attention than the intellectual and moral association in America." It is fitting that social participation holds an important place in sociological study, representing, as it does, a link between individual action and societal function. Social participation is important to participatory democracy, to healthy neighborhoods and to effective schools (Putnam 2000). Individuals who participate may also be advantaged in the labor market: social and economic resources are embedded in social networks (Coleman 1988; Granovetter 1973),[1] networks that may be formed by way of involvement in various social organizations and associations. Social participation is also associated with better physical and mental health and well-being, important outcomes in and of themselves, but also important for the labor market (Berkman 1995; Durkheim 1933; House 1981; House, Landis and Umberson 1988).

From the mid 1940s to the early 1970s, there was an unprecedented increase in social participation in the United States. This trend coincided with unprecedented and widespread economic prosperity, marked by a low rate of unemployment and generally increasing real earnings. In recent decades, however, average rates of social participation have declined (McPherson, Smith-Lovin and Brashears 2006; Putnam 2000). Likewise, the trend toward increasingly widespread economic prosperity in the United States has reversed: recent decades have been characterized by high and persistent unemployment, stagnating average earnings,

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[1]Mouw (2003) argues that often used measures of social capital, such as the average education or job prestige of contacts, have a spurious rather than causal effect, at least on wages. This does not necessarily mean that social capital does not matter, but that we may need better measures of it.

increases in income inequality, waves of job insecurity, job displacements and difficulty replacing lost jobs with comparable reemployment (Brand 2006; Fallick 1996; Farber 2005; Farley 1996; Levy 1995). Scholars argue that the relationship between workers and firms has shifted, that the expectation of a lifetime job has diminished for growing segments of the workforce and workers are increasingly seen by employers as costs that need to be minimized in order to increase profits (Baumol et al. 2003; Fischer et al. 1996; Kalleberg 2000).

Given the parallel rise and fall of widespread social participation and economic prosperity in the United States, economic distress has been indicted as a potential cause for declines in social participation (Bellah et al. 1985; Jahoda, Lazarsfeld and Zeisel 1933; Putnam 2000). Macroeconomic trends can initiate individual economic pressures that are associated with declines in social involvement (Putnam 2000). Additionally, erosion of norms of reciprocity in the changing workplace (i.e., declines in social trust or the sense of mutual obligations) may serve to dampen like norms in the community. Both economic distress and the erosion of norms of reciprocity may result from job insecurity and displacements, such that the event of a job displacement may exert a significant impact on individual decline in social participation. There is some evidence suggesting that stable employment and an orderly career marked by functionally related, hierarchically-ordered jobs (i.e., the absence of job displacements and downward socioeconomic mobility) is associated with higher levels of social integration (Wilensky 1961; Wilson and Musick 1997a).

Research Description and Goals

This paper examines four research questions. First, is job displacement associated with a lower probability of involvement in various modes of social participation over the lifecourse? As a form of job loss that occurs when firms downsize, restructure, close plants or relocate, job displacement is the result of economic and business conditions that are largely beyond the control of the individual worker. Job loss among displaced workers is thought to be relatively exogenous to individual characteristics in comparison to workers who quit or are fired, providing a unique opportunity to assess the effects of changes in job and socioeconomic conditions less likely to be strongly influenced by selection bias (Brand 2006). However, these conditions do not preclude the possibility that displacement is conditioned by factors that are also associated with levels of subsequent social participation, leading to bias in the estimation of the effect of displacement on participation. We assess the extent to which observed differences in social participation between displaced and non-displaced workers over the lifecourse are the result of the displacement event versus a range of factors associated with being displaced from a job.

Second, how do the effects of job displacement on social participation differ over the working lifecourse? While several studies suggest that job displacement is as economically and psychologically damaging for older displaced workers as younger displaced workers, if not more so (Chan and Stevens 2001; Couch 1998; Gallo et al. 2000), we hypothesize that displacement is less *socially* damaging as individuals age and approach retirement. Older workers who are displaced may have peers who are retiring and voluntarily downsizing; thus, older workers may be less stigmatized by unemployment and downward mobility and consequently less likely to withdraw from social life. Moreover, research on lifecourse trends in social participation indicates that all individuals are less likely to participate as they age (Freeman 1997; Putnam 2000), such that older workers who do not lose jobs should also exhibit some decrease in participation.

Third, if there is an effect of job displacement on social participation, is this effect explained by post-displacement downward socioeconomic mobility and/or psychological well-being of displaced workers? To address this question, we examine the extent to which the effects of job

displacement on social participation are mediated by post-displacement changes in employment status, earnings and occupational status, and by psychological distress and decreased feelings of social trust or reciprocity.

Fourth, most prior studies linking work and social participation have examined differences in orderly vs. disorderly careers, where "disorderly" is marked by substantial job change. However, a relatively small proportion of displaced workers experience multiple involuntary job displacements. We question whether a single displacement event is associated with lower probabilities of social participation, or whether disorderly careers marked by multiple displacements characterize those whose participation declines.

Throughout this study, we use panel data from the Wisconsin Longitudinal Study comprised of a cohort of 1957 Wisconsin high school graduates. Born in approximately 1939–1940, the WLS cohort belongs to the generation Putnam (2000) describes as the "cohort of joiners;"[2] moreover, the majority of WLS respondents have lived in the Midwest throughout their lives, a region of the country with particularly high levels of social engagement (Putnam 2000). The use of the WLS therefore allows us to assess the effects of job displacement on social participation for a particularly socially-engaged sample of the U.S. population over the course of their lives. If displacement significantly affects average levels of participation among members of the WLS cohort, who may be more strongly committed to participating, it may have even larger effects among members of less-committed younger cohorts.[3] The WLS also offers several strengths for a study of the effects of job displacement, including a rich set of exogenous variables useful in constructing a comparable control group of non-displaced workers and more than 45 years of panel data to study the effects of displacement over the lifecourse. We examine the effects of displacement on participation over respondents' prime working years and prime participation years, ages 35 to 53, as well as the years when a large percentage of respondents near and enter retirement, ages 53 to 64.

This study contributes to two literatures. First, we add to the literature on negative outcomes associated with job displacement. Despite a large and growing body of research examining the effects of job displacement on subsequent levels of non-employment, earnings, job quality and health, we know of no study that directly examines the effects of displacement on social participation. Thus, while we know that job displacement can be economically and psychologically damaging, we do not know whether and to what extent displacement is socially damaging. Second, we add to the literature on the relationship between work and social participation, which has evaluated the correlation between participation and employment status, earnings and disorderly career histories, but not the event of a job displacement. The increasing incidence of job displacement among growing segments of the workforce raises the question of whether, even in the absence of chronic or prolonged unemployment, job loss decreases the likelihood of social involvement. Job displacement is involuntary and often unforeseen and induces abrupt changes in one's lifecourse; negative, uncontrollable, unpredictable life events have been found to be particularly important for individual well-being (see Thoits 1995 for a review). Moreover, our focus on the event of a job displacement enables us to examine within-individual changes in job and socioeconomic conditions and subsequent probabilities of social participation, and to pay careful attention to the possibility of selection bias influencing observed relationships.

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[2]Rotolo and Wilson (2004) argue that after appropriate controls for socio-demographic trends are imposed, generational differences in levels of social participation disappear. In other words, while there are observed cohort differences in levels of social participation, these differences are the results of difference in socio-demographic variables.

[3]It is possible that the reverse is true. It could be the case that although there may be higher observed levels of social participation among the WLS cohort, members of the cohort were more loosely connected to social life, such that events such as job displacement might have larger effects on declines in social participation than for younger cohorts.

Research on the Effects of Job Displacement

Job displacement has been linked to downward socioeconomic mobility and psychological distress. Most estimates indicate that the average displaced worker experiences a substantial period of non-employment, lasting from many months to several years (Brand 2004; Fallick 1996; Farber 2005; Kletzer 1998; Podgursky and Swaim 1987; Ruhm 1991). Displaced workers also suffer substantial earnings losses, estimated to be between 10 and 25 percent, and these losses are generally more persistent than non-employment effects (Brand 2004; Farber 2005; Hammermesh 1989; Jacobson, LaLonde and Sullivan 1993; Podgursky and Swaim 1987; Ruhm 1991; Seitchik 1991; Stevens 1997). Beyond employment and earnings losses, displaced workers may find when reemployed that their jobs are of lower quality, including lower occupational status and job authority, in comparison to both the jobs they lost and the jobs held by their non-displaced counterparts (Brand 2006). There is evidence to suggest that effects of job displacement persist throughout workers' careers (Brand 2004), and that older workers experience significant negative effects of job displacement on subsequent employment and wages (Chan and Stevens 2001; Couch 1998).

Job displacement often includes a sequence of stressful events from anticipation of job loss through the loss itself, to a spell of unemployment, to job search and training, to reemployment at reduced wages and status. Initial movement into unemployment is associated with a number of economic pressures, new patterns of interaction with family members, and personal assessment in relation to individual values and societal pressures (Pearlin et al. 1981). It is therefore not surprising that a significant association has been found between job displacement and psychological distress over the lifecourse: displaced workers report lower levels of self-acceptance, self-confidence, morale and higher levels of depression and dissatisfaction with life (Burgard, Brand and House 2007; Dooley, Fielding and Levi 1996; Gallo et al. 2000; Kessler, Turner and House 1989; Turner 1995; Warr and Jackson 1985).

Research on the Relationship between Work and Social Participation

Despite the rather large literature on the negative effects of job displacement on socioeconomic status and psychological well-being, we know of no study that directly examines the effect of job displacement on social participation. However, there are several reasons to suspect a relationship between displacement and participation based upon existing research. Employment and career stability have long been considered important factors in social participation (Durkheim 1933; Kohn and Schooler 1982; Rotolo and Wilson 2003; Wilensky 1961; Wilson 2000; Wilson and Musick 1997a). Durkheim (1933) argued that employment performs an integrative role, drawing people into social life. Expanding on Durkheim's theory, Wilensky (1961) found that orderly careers (i.e., a succession of jobs related in function with elevations in status, free of unexpected periods of unemployment and disorderly shifts) were associated with strong attachment to one's community and society for a sample of "middle mass" men in the Detroit metropolitan area. Rotolo and Wilson (2003), in a replication of Wilensky's (1961) study, examined a sample of 686 individuals in Nebraska in 1989 and show that disorderly careers have the potential to undermine social participation. While an interesting and provocative set of results emerge from these studies, data restrictions, including small sample sizes, cross-sectional data and lack of control variables, make causal statements difficult. Moreover, to be characterized as disorderly, the career must entail substantial job movement, whether voluntary or involuntary. The growing public concern with the effects of involuntarily being displaced from one's job, even if the displacement occurs but once in the career, makes the study of the effects of job displacement applicable to a large segment of the working population.

There are other reasons to suspect a relationship between job displacement and social participation. Studies have linked some of the potential outcomes of job displacement, including unemployment, low earnings and psychological distress, to decreased levels of social participation (Freeman 1997; Putnam 2000; Wilson 2000). Moreover, the "spillover" theory asserts that being employed in a job that encourages initiative, thought and independence also indirectly encourages social participation (Kohn and Schooler 1982; Rain, Lane and Steiner 1991; Staines 1980; Wilson 2000; Wilson and Musick 1997a); decreased levels of job authority and autonomy among displaced workers (Brand 2006) may thus dampen displaced workers' levels of social participation. Likewise, "job strain" or "low decision latitude," (Karasek and Theorell 1990) potentially more common among displaced workers' new jobs, has been found to exert a negative effect on social participation (Lindstrom et al. 2006; Vezina, Derriennic and Monfort 2004). Finally, values and attitudes towards oneself and one's society may influence levels of participation. Putnam (2000) argues that where positive social roles, social trust and norms of reciprocity flourish, individuals participate socially. However, displacement may negatively alter individual attitudes and self-perception, and thus, reduce participation. In sum, the strain of insecure employment, actual displacement events, periods of unemployment, reemployment in jobs with lower earnings and/or lower quality, psychological distress and the erosion of commitment to social reciprocity may all contribute to decreased levels of social participation among displaced workers.

Statistical Models

We estimate the effects of job displacement on subsequent social participation using a series of logistic regressions. All outcomes have two possible values, where 0 indicates no social involvement and 1 indicates involvement. The first estimator is a bivariate model of the form:

$$\text{logit}(p_{it})=\alpha_t+\delta(d_i)+\varepsilon_{it} \quad (1)$$

where d_i indicates displacement status and δ is the effect of displacement on p_{it} the probability of social involvement for individual *i* at time *t*. The assumption needed to make $\hat{\delta}$ an unbiased estimate of δ is that d_i is uncorrelated with ε_i. In an observational study, this is almost always an implausible assumption. Consequently, second, we estimate effects using a logistic regression model with adjustment for observed pre-displacement covariates of the form:

$$\text{logit}(p_t)=\alpha_t+\delta(d)+\beta(X_{t^1})+\varepsilon_t \quad (2)$$

where X_t1 includes a set of observable, pre-displacement covariates (and we omit subscript *i* for simplicity here and in all subsequent equations). Here, the assumption needed for $\hat{\delta}$ to be an unbiased estimate of δ is that *d* is uncorrelated with ε after controlling for the vector of exogenous covariates. There may, however, be systematic differences between displaced and non-displaced workers' probabilities of social involvement even after conditioning on observed pre-displacement covariates. A common utilization of panel data for estimating the effects of events is to obtain two or more time-separated measures of selected outcomes. Our third estimator adjusts for observed pre-displacement covariates and for pre-displacement probabilities of social involvement and takes the form:

$$\text{logit}(p_t)=\alpha_t+\delta(d)+\beta(X_{t^1})+\lambda(p_{t^1})+\varepsilon_t \quad (3)$$

where p_t1 indicates pre-displacement social participation and λ is the effect of pre-displacement participation on the probability of post-displacement participation. Here, the less-demanding assumption needed for $\hat{\delta}$ to be an unbiased estimate of δ is that *d* is uncorrelated with ε after

controlling for the vector of exogenous covariates and pre-displacement social participation. Utilizing pre-displacement measures of social participation can be a powerful approach to establish a relationship between displacement and participation, reducing potential bias from the influence of pre-displacement participation on both the probability of displacement and subsequent participation.

Models that control for pre-treatment outcome measures by including these variables as regressors (i.e., the "regressor variable" method in Equation 3) may under-adjust for prior differences by treating these variables like any other variable rather than assigning them special status (Allison 1990). For causal inference, a change score approach, where the outcome is specified as the difference between the post- and pre-treatment measures, may be preferable to the regressor variable method (Allison 1990, 1994; Halaby 2004). A change score model, or fixed effects estimator, or in the two-period case, difference-in-differences model, takes the following form:

$$\text{logit}(p_t - p_{t^l}) = (\alpha_t - \alpha_{t^l}) + \delta(d) + \beta(X_t - X_{t^l}) + (\varepsilon_t - \varepsilon_{t^l}) \quad (4)$$

where the measured explanatory variables that are constant across time and temporally-invariant unobserved differences both drop out. By assigning special status to the pre-treatment outcome measure, the change score approach effectively controls for unobserved time-invariant differences between treated and non-treated units (Allison 1990). Still, measures of pre-displacement participation have by far the largest associations with post-displacement participation, such that these variables do garner a relatively special status in the regressor variable models. While Allison (1990) generally prefers the change score method, he argues that both models do a good job of accounting for empirical patterns in observational studies and that each has its strengths. In particular, models that include pre-displacement participation as regressors offer some advantages over the change score method in our analysis. First, the regressor variable method may be preferable when the pre-treatment measure has a causal effect on the post-treatment measure, particularly when the outcome in question is subject to reinforcement or habit formation (Allison 1990); this is a reasonable expectation in the case of social participation (Wilson 2000; Wilson and Musick 1999). Second, the change score method eliminates all observations that do not change from time t' to time t; as change is infrequent with a binary dependent variable, this amounts to a substantial reduction in the number of cases utilized and reduction in statistical power.

We concur with many quantitative sociologists that researchers should remain flexible in exploring alternative model specifications and report inferences from multiple models (Morgan and Winship 2007). Thus, while our main findings are based on the regressor variable method, we compare these results with a final set of results using the change score method. Comparison of these estimators provides insight into the potential role of unobserved permanent properties of individuals that may bias observed relationships between displacement and social participation.

Data, Measures and Descriptive Statistics

Wisconsin Longitudinal Study data are used throughout this study. The data are drawn from a panel study of 10,317 Wisconsin high school graduates; these graduates represent a one-third random sample of all seniors in Wisconsin high schools in 1957. Data were collected first in 1964, second in 1975, when respondents were approximately 35 years old, third in the early 1990s when respondents were approximately 53 years old, and finally in the mid-2000s, when respondents were approximately 64 years old. The WLS has enjoyed high rates of response and sample retention: in 1964 and in 1975, response rates were 87 and 89 percent, respectively.

Out of 9,741 known survivors of the original sample, 87 percent completed telephone interviews in 1993, 36 years after the initial data collection. Mail survey response, conditional on completed telephone interviews, was about 80 percent. In 2004, 7,265 sample members responded to the telephone survey and 6,467 responded to the mail survey.

WLS data are particularly well-suited for the study of job displacement and social participation. Detailed job history records collected in 1993 and 2004 allow identification of job displacements for employment spells spanning 30 years. As a panel study, the WLS lends itself to modeling efforts to control for unobserved heterogeneity. In 1975, 1993 and 2004, respondents were asked about their involvement in various social groups, associations and organizations. The data are also especially strong insofar as they capture a wide range of pre-displacement exogenous variables, including social origins, cognitive ability, educational attainment and labor market experiences. Thus, the data are well-suited for minimizing omitted-variable bias in the estimation of the effects of displacement on participation.[4]

The strengths of the WLS notwithstanding, there are some sample limitations that need to be noted. All respondents are high school graduates, and the majority are white men and women who lived in Wisconsin when surveyed.[5] The segment of the U.S. population that is inadequately represented by the WLS, namely less-educated ethnic minorities, is more likely to have experienced displacement-induced socioeconomic losses than predominantly white high school graduates. It is less clear whether a decline in social participation would be greater for the segment of the population inadequately represented in the WLS. Restrictions that may compromise external validity may nevertheless reduce unobserved extraneous variation, which should make for more reliable estimates. Nor is it a foregone conclusion, at least where stratification processes are concerned, that findings from the WLS are radically different than what one might find in a national sample (Jencks, Crouse and Mueser 1983;Sheridan 2001).

We restrict our analyses to cases who responded to the 1975 survey (n = 9,138), the 1993 telephone and mail surveys (n = 6,690), and the 2004 telephone and mail surveys (5,299 cases). We also restrict our analyses to those respondents who had a least one job spell (a paid job for six months or longer) during the period 1975–2004 (5,155 cases) and who had no missing data on any of the variables used in any of our analyses (4,373 cases). Using data over the course of individuals' lives and for many, sometimes sensitive, measures from multiple waves results in a large amount of attrition. We examine differences in descriptive statistics between the full sample and our analysis sample, and find that average estimates for several measures indicate slightly greater disadvantage among the full sample.[6]

We classify a WLS worker as displaced if he or she reported the termination of an employment spell as a result of a lay-off, downsizing or restructuring, or a business closing or relocating. A total of 756 out of 4,373 workers with at least one employment spell (17 percent) experienced one or more displacement events between 1975 and 1993 and 497 out of 4,103 workers with at least one employment spell (12 percent) experienced one or more displacement events between 1993 and 2004. Eighteen percent of workers displaced between 1975 and 1993 were also displaced between 1993 and 2004, while 11 percent of workers who were not displaced between 1975 and 1993 were displaced between 1993 and 2004. Displaced workers have had more employer spells (i.e., they tend to have a higher number of jobs held with different employers). A relatively small number of displaced workers experienced more than once

[4]See Brand (2004, 2006) for further discussion of the WLS as compared to other datasets that have been used in the study of job displacement on career outcomes.

[5]Although about 19 percent of the sample is of farm origin, this is not inconsistent with national estimates for cohorts of the late 1930s.

[6]Although we report estimates based upon list-wise deletion, we also estimate all of our results using five multiple imputed datasets and find that results are substantively similar. Missing values for parents' income and several mediating variables were imputed for the results presented here.

displacement event: 128 between 1975 and 1993 and 46 between 1993 and 2004. Most displaced workers were reemployed post-displacement during the observation period 1975 to 1993, while about one-third do not return to work subsequent to being displaced over the period 1993 to 2004, the majority of who report having retired. Cumulative years of unemployment are very similar across displaced and non-displaced workers.

Independent and Mediating Variables

The risk of job displacement varies along a number of dimensions that in turn condition the extent to which displacement may influence the probability of social participation. Table 1 describes the social background, human capital, job conditions and family characteristics of respondents by displacement status for the 1975–93 and 1993–04 periods. The measurement of most of these variables is straightforward. Parent's income in 1957 is truncated at $99,800 and a started log transformation is used to reduce skewness.[7] While parents' income is often omitted in studies of the effects of job displacement, it has been found to significantly influence the probability that a worker is displaced net of the set of human capital and job variables included in most models (Brand 2006). Mental ability is based on the Henmon-Nelson high school IQ scores. We include a continuous measure of years of educational attainment.[8] Displaced workers are on average less educated than non-displaced workers. Job characteristics correspond to 1975 for 1975–93 analyses and to 1993 for 1993–04 analyses. These include pre-displacement occupational earnings, class of worker (dichotomous variable indicating private employer), industry (dichotomous variable indicating manufacturing), occupation (dichotomous variable indicating blue-collar), union status, and whether or not the worker is eligible for an employer-offered pension. The 1990-basis occupational status, or "occupational earnings," score is the percentage of persons in the 1990 Census in an occupation/industry/class-of-worker category who earned at least $14.30 per hour in 1989 (Hauser and Warren 1997).[9] WLS displaced workers have lower occupational status, lower job tenure, are less likely to receive employer-offered pension benefits, are more likely to be private sector and manufacturing workers, and are less likely to be covered by a union than WLS non-displaced workers. We also include an indicator of marital status and an indicator of the whether or not the respondent had any children in 1975 and in 1993. Gender is not a significant predictor of whether or not a worker is displaced; we include sex as a predictor, but do not estimate models separately by sex.

We also assess the degree to which the effects of job displacement on social participation are mediated by post-displacement socioeconomic mobility and psychological distress. Our measures of socioeconomic mobility include indicators of changes in employment status, hourly wages and occupational status (measurement described above) from 1975 to 1993 and from 1993 to 2004.[10] For workers displaced between 1975 and 1993, we examine the impact of including the difference between 1975 pre-displacement and 1993 post-displacement socioeconomic status on 1993 social participation and the difference between 1975 pre-displacement and 2004 post-displacement socioeconomic status on 2004 social participation; for workers displaced between 1993 and 2004, we examine the impact of including differences in 1993 pre-displacement and 2004 post-displacement socioeconomic status on 2004 social

[7] A started log means that a small positive constant ($500) is added to each respondent's value before taking the log.

[8] Although we might have operationalized educational attainment as a series of dichotomous measures of years of schooling completed, we find in supplementary analyses that our results are not sensitive to this choice of operationalization.

[9] Hauser and Warren (1997) recommend that a started logit transformation of these percentages be used to correct for heteroskedasticity. The started logit transformation takes the form: $SL(oe) = \ln [(oe+1)/(100-oe+1)]$, where oe is occupational earnings. We do not include baseline wages as this was not a significant predictor of job displacement when controlling for occupational status.

[10] In order to retain all the individuals in the sample, even those who were not reemployed after displacement, our measures of occupational status correspond to a respondent's current or last job, which for workers who were never reemployed post-displacement corresponds to the job the worker was displaced from. This concession may serve to understate the degree to which occupational status mediates the impact of displacement on participation.

participation. Our measure of depression is based on the widely used 20-item Center for Epidemiological Studies Depression Scale (Radloff 1977). CES-D index items are based on a count of the number of days (0–7) in the last week that the respondent felt as indicated in each of the 20 questions; items are summed for a total range of scores from 0 (least) to 140 (most depressed).[11] We include an index of self-acceptance based on seven items indicating acceptance and confidence regarding achievements in life, where each indicator is based on a six-point scale ranging from "agree strongly" to "disagree strongly;" items are summed for a total range of 0 (lowest level of self-acceptance) to 42 (highest level). Finally, we include an index of social trust and reciprocity based on six items indicating perceived patterns of social interactions, such as trust, consideration and cooperation.[12] The six items are summed for a total range of 0 (lowest level of reciprocity) to 36 (highest level).

Dependent Variables

We examine six dichotomous measures of social participation where 0 indicates no involvement and 1 indicates any level of involvement (see Ruiter and De Graaf 2006 for a discussion of the choice to dichotomize social participation outcomes): (1. involvement in church-connected groups or at least weekly church attendance; (2. involvement in charitable organizations; (3. involvement in youth groups or community centers; (4. involvement in civic or business groups, political groups or neighborhood organizations; (5. involvement in professional groups; and (6. involvement in social or leisure activities including country clubs, sports teams or at least weekly social gathering with friends. We believe these are reasonable groupings of measures of participation based on substantive interest, levels of involvement and lifecourse patterns of involvement. For each of these six measures, we use data from 1975, 1993 and 2004; Table 2 provides descriptive statistics. Church activities have the highest overall mean level of participation over the lifecourse, followed by involvement with leisurely social activities, particularly at age 35. Involvement with youth and community groups is also highest earlier in the lifecourse among the three points in time we observe, while several forms of involvement seem to increase as respondents age. For example, we observe high levels of involvement in charitable organizations, civic and neighborhood groups, and professional groups at age 53.

Results

Effects of Job Displacement on Social Participation over the Lifecourse

We estimate a series of models to assess the effects of displacement on subsequent probabilities of social participation: (1. bivariate estimation for differences in mean probabilities of social participation between displaced and non-displaced workers in 1993 (age 53) and 2004 (age 64); (2. estimation with pre-displacement covariate adjustment in 1993 and 2004; and (3. estimation with pre-displacement covariate adjustment including pre-displacement social participation (i.e., control for participation measures in 1975 for workers displaced 1975–1993 and in 1993 for workers displaced 1993–2004). For workers displaced 1975–1993 (ages 35 to 53), we assess social participation in 1993 and 2004 (at ages 53 and 64, respectively), and for workers displaced between 1993 and 2004 (ages 53 to 64), we assess social participation in 2004 (at age 64). The control group of workers who are not displaced 1975–1993 will include workers who may have been displaced between 1993 and 2004; likewise, the control group of

[11]The distribution of CES-D is right-skewed. We also run models where we take the log of CES-D and models where we dichotomize CES-D at the clinically-relevant threshold; these different operationalizations have little influence on the estimates of the effects of displacement on social participation.

[12]In the WLS, this index is called "agreeableness." We, however, feel that it taps into many of the theoretical constructs described by Putnam (2000) of social trust, including consideration for and cooperation with others, and general reciprocity. Thus, for theoretical consistency, we label this index "social reciprocity." Both self-acceptance and social reciprocity are indices constructed by WLS staff.

workers who are not displaced 1993–2004 will include workers who may have been displaced 1975–1993 (see Brand and Xie 2007 for discussion on choice of controls for time-varying treatments).

Table 3 provides logistic regression estimates, presented as odds ratios, of the effects of job displacement on selected measures of social participation at age 53 (in 1993) and age 64 (in 2004) for displacement occurring ages 35 to 53 and ages 53 to 64 for each of the three model specifications described above. We present unstandardized coefficients; results are substantively similar when we standardize. Models 1 and 2 are tests of mean differences between displaced and non-displaced workers' social participation. This test of differences introduces basic patterns in the data and provides a benchmark against which to evaluate changes that occur as a result of controlling for factors influencing the observed association. We find that WLS workers who were displaced ages 35 to 53 are significantly less likely than workers who were not displaced during this period to participate in church-related activities, charitable organizations, youth and community groups, professional groups, and social/leisure activities at age 53 and at age 64 (Model 1). The odds of involvement in these forms of social participation for displaced workers are .70 to .83 times as high as the odds for non-displaced workers. Or, alternatively, the odds of involvement for non-displaced workers are roughly 1.2 to 1.5 times higher than the odds for displaced workers. We do not find a significant association between displacement and involvement in civic/neighborhood groups. In contrast, workers who were displaced ages 53 to 64 are no less likely to participate in any form of social involvement at age 65 relative to workers who were not displaced in their 50s or early 60s (Model 2).

The bivariate estimates of models 1 and 2 are unbiased estimates of the effects of displacement if displacement is random with respect to observed and unobserved factors affecting levels of social participation. As the descriptive statistics presented in Table 2 demonstrate, this is not a reasonable assumption. How do the estimated effects of job displacement on social participation change when observed pre-treatment differences between displaced and non-displaced workers are accounted for? Models 3 and 4 in Table 3 report the odds ratios controlling for the set of pre-displacement covariates. We provide the estimates for the effects of displacement and not for the other covariates included in our models (the full set of coefficients are available from the authors upon request).[13] With the exception of involvement in professional groups, the lower probabilities of social involvement among workers displaced age 35 to 53 relative to their observationally equivalent non-displaced counterparts are only slightly reduced and still statistically significant at age 53. However, the lower probability of involvement with professional groups is explained by the differential job characteristics held by displaced and non-displaced workers. Lower probabilities of involvement in church-related activities, charitable organizations, youth and community groups, and social/leisure activities are still significant at age 64, but the strength of the association declines in some cases. Again, there is no significant decline in participation for workers displaced ages 53 to 64 (Model 4).

Models 5 and 6 in Table 3 report estimates of the effects of job displacement on social participation adjusted for pre-displacement covariates and pre-displacement measures of social participation. As permanent unobservable properties of individuals should influence pre-displacement social participation, controlling for these measures provides some adjustment for unobserved heterogeneity that may influence the results presented in models 3 and 4. Estimates

[13]Other covariates operate as expected based on existing literature: more educated, white-collar respondents with higher levels of occupational status, or those individuals with higher demands on their time, are more likely to participate in most forms of organization. Mental ability increases involvement in charitable organizations and professional groups, and decreases participation in church-related activities. Men are generally more likely to participate than women at age 52 and less likely to participate at age 65 (Wilson 2000). Pre-displacement social involvement is the strongest predictor of post-displacement social involvement, and thus garners special status with respect to other covariates included in our models.

of the effects of job displacement on social participation are smaller than estimates which do not control for baseline social participation. Still, we continue to observe substantively and statistically significantly lower levels of involvement in church-related activities, charitable organizations, youth and community groups, and social/leisure activities for workers displaced in their prime earnings years relative to non-displaced observationally equivalent counterparts (Model 5). The odds of involvement in these forms of social participation for displaced workers are .73 to .87 times as high as the odds for non-displaced workers. With the exception of church-related activities, we continue to observe significant effects at age 53 and at age 64. While we continue to observe no significant decline in participation for workers displaced ages 53 to 64, we do, nevertheless, observe a significant increase in involvement with charitable organizations. While we did not expect to observe a significant decline in social involvement for older workers, we also did not expect to observe any increase in involvement. However, when we run models stratified by sex and retirement status, we find a significant increase in the probability of involvement in charitable organizations only among retired women, but not among men or working women (results not shown).

Are the Effects of Job Displacement on Social Participation Mediated by Post-Displacement Socioeconomic Mobility and Psychological Distress?

In view of the significant negative effects of job displacement on the probability of involvement in several forms of social participation, we explore whether these effects can be explained by declines in socioeconomic status and subsequent psychological distress. As we discuss above, there is considerable evidence to suggest that job displacement has an effect on these potentially mediating variables. In fact, downward socioeconomic mobility characterizes the experience of the majority of displaced workers in our sample. Models 7 and 8 in Table 4 control for changes in employment status, log wages and occupational status for workers displaced ages 35 to 53 and ages 53 to 64, respectively. We find only a slight decrease in the estimated effect of job displacement on social participation controlling for these mediating factors. However, the effects of displacement on leisurely social activities at age 64 for workers displaced ages 35 to 53 is no longer statistically significant. We continue to find no significant decline in social participation for older displaced workers, and an increase in involvement with charitable organizations.

Models 9 and 10 further control for depression, self-acceptance and social reciprocity. While prior research suggests that job displacement has significant effects on these indicators of psychological well-being and these indicators have significant effects on the probability of social involvement, controlling for these variables has very little impact on the relationship between displacement and social participation, particularly in models in which we also control for downward socioeconomic mobility. Overall, the results suggest that being displaced from a job is negatively associated with the probability of social involvement, and that this association is not explained by displaced workers' subsequent downward socioeconomic mobility and lower levels of psychological well-being or perceived social trust. The odds of involvement in several measures of social participation remain .71 to .85 times as high for displaced workers as the odds for non-displaced workers.

Are Single or Multiple Displacement Events Associated with Lower Probabilities of Social Participation?

Our final research question asks how disorderly the career need be to affect social involvement. Most prior studies have examined not displacement events per se, but characterizations of careers as marked by substantial job change. Scholars working along these lines have argued that career disorder is negatively associated with social participation. However, much of the public and political concern with downsizings and layoffs is not whether extreme career

disorder affects the life paths of workers, but whether even a single job loss alters the lives of workers. Moreover, the majority of workers who involuntarily lose jobs do not experience subsequent involuntary job losses. Among workers in our sample who experience multiple displacements, most experience two displacements.

Table 5 provides estimates of the effects of job displacement on social participation for single vs. multiple displacements. Our models include a categorical indicator of displacement where "one displace" indicates a single displacement and "two+ displace" indicates two or more displacements, and no displacement is the reference category. We continue to control for the full set of pre-displacement covariates, including pre-displacement participation. We find that workers who experience one displacement from 1975 through 1993 are significantly less likely to participate in church-related activities, charitable organizations, youth and community groups, and leisurely social activities; the magnitude of these effects generally resembles those of Model 5. In contrast, workers experiencing disorderly careers marked by multiple job displacements are not significantly less likely to participate in charitable organizations or youth and community groups relative to non-displaced workers. In descriptive tabulations not shown, we observe that workers who experience multiple displacements are less likely to participate in these groups prior to being displaced, and thus have less possibility for decline subsequent to being displaced.

Table 6 provides estimates for a final set of models using the change-score approach. Results suggest that controlling for time-invariant unobservable characteristics of workers eliminates the significant negative effect of displacement on the probability of involvement with charitable organizations. Other levels of significance also decline; in particular, the marginally significant effects of displacement on leisurely social activities are also no longer significant. Effects of displacement on declines in involvement with church-connected groups and youth and community groups, however, remain significant in the change score models. The effect of displacement on involvement in charitable organizations is influenced by gender. In change-score models stratified by gender (not shown), we find that men who are displaced have substantial, statistically significant declines in involvement in charitable organizations, while displaced women have (insignificant) increases in involvement. Thus, results across the regressor variable and change-score models for men are comparable, while the estimated effect of displacement is substantially larger in the regressor-variable model than the change-score model for women. This pattern of gender differences yields an insignificant effect of displacement on involvement in charitable groups when considering the pooled sample of men and women in change score Model 13.

Despite its general attractiveness for causal inference, the change score approach may not be preferable to the regressor-variable approach in certain situations. It is reasonable to presume that earlier social involvement has a causal effect on later social involvement; in this case, we may prefer the regressor-variable approach to the change-score method (Allison 1990). In addition, the dichotomization of social involvement means a change in participation signifies that an individual went from any level of involvement to no involvement (or the reverse). Looking at the sample sizes below each estimate we report in Table 6, we see that generally only about a third of WLS workers undergo change in social participation over the observed periods, leaving us a sample much reduced in size and statistical power. More nuanced indicators of change in social participation may well have produced more significant findings. These factors notwithstanding, we temper causal claims of the overall effect of displacement on involvement in charitable organizations.

Summary and Discussion

This study provides evidence for yet another negative outcome associated with early- to mid-career job displacement: significant and long-term lower probabilities of involvement in various modes of social participation. Late-career displacement, in contrast, is not associated with lower probabilities of social participation. We conjecture that this is because job displacement is a less socially damaging event for workers as they near retirement. Most prior studies have focused on career disorder characterized by substantial job movement and lack of orderly progression. We find that a single displacement event is associated with a substantially lower probability of subsequent social involvement. Given the public apprehension over the possibility of even a single displacement event, this is an important result. The group of workers who experience multiple displacements has the lowest level of job stability; for such workers, we reason that displacements may be more normalized and thus less likely to lead to declines in their already lower levels of social involvement.

We hypothesized that lower probabilities of social participation among displaced workers may be explained by post-displacement downward socioeconomic mobility and declines in psychological well-being and social trust; however, controlling for these factors only marginally reduces the observed relationships between displacement and participation. That is, displaced workers who do and those who do not experience downward mobility and psychological distress similarly withdraw from social activities relative to their non-displaced counterparts. Still, some of these factors, particularly social trust, are difficult to measure, and we may not have fully captured the underlying latent construct. Measurement issues aside, while these mediators were obvious candidates, there are nevertheless several other possible explanatory mechanisms. Another potential mediator is displacement-induced geographic mobility and resulting severing of community ties. However, we briefly explore this possibility in preliminary analyses not shown; we find no appreciable impact on the effect of displacement on participation controlling for change in residential location from pre- to post-displacement. Still, whether or not displaced workers geographically relocate, many social connections (e.g., work, peer and family connections) are assuredly upset by job disruptions, and research has shown that social connections are an important predictor of social involvement (McPherson, Poplielarz and Drobnic 1992; Wilson 2000; Wilson and Musick 1997b; Wilson and Musick 1999). Social connections increase information about opportunities to participate and the chance that one is asked to participate (Freeman 1997; Wilson and Musick 1997a). Severed family connections may be distinctly important. Job displacement is associated with divorce (Charles and Stephens 2004), and social involvement is associated with married life (Rotolo and Wilson 2006). In fact, we find the most robust effects of displacement on church and youth and community groups, forms of involvement linked with family life. There is likely not a single explanation for a decline in social involvement among displaced workers, but various interrelated factors at work and heterogeneity among displaced workers as to which factors predominate.

Our series of model specifications provides information about selection mechanisms influencing the relationship between job displacement and social participation. We find that failing to control for observed covariates influencing selection into displacement, including social background and job characteristics and pre-displacement social participation, leads to some overstatement of the negative effects of displacement on social participation. Nevertheless, we continue to find enduring, substantively and statistically significant lower probabilities of social involvement over the lifecourse among workers displaced during their prime working years. Given the findings based on the change score models, we temper claims of causal effects of displacement on declines in the probability of involvement in charitable organizations and leisurely social activities. Future work should continue to explore the role

of unobserved characteristics of workers and potential gender differences influencing the relationship between job loss and declines in these forms of participation.

This study faces some limitations. Our use of WLS data, while offering several advantages over prior studies, means that we do not have adequate representation of workers without a high school degree or ethnic minorities. Such workers are likely to have experienced displacement with more severe socioeconomic losses than graduates of predominantly white high schools. However, whether or not those workers experience more or less of a decline in social involvement is still an empirical question. Another limitation of the WLS is the lengthy observation windows. As our pre-displacement covariates are measured prior to the displacement event, and our observation windows of displacement are from 1975 to 1993 and from 1993 to 2004, we necessarily restrict the characteristics of workers we control for to those measured in 1975 and 1993, respectively. In our window of observation from 1975 to 1993, some workers were displaced closer to 1975 and some closer to 1992, and effects may differ depending upon when displacement occurs. Still, for workers displaced over the lengthiest window, from 1975 to 1993, the effects of displacement are generally long-term, i.e. we observe declines in social participation both in 1993 and in 2004.

In summary, we find that job displacement exerts a significant negative effect on the probability that an individual will choose to participate in his or her social surroundings. Thus, while prior studies have found significant economic and psychological consequences of displacement, we find significant social consequences of displacement. Given the potential importance of social capital to individuals' position in the labor market, in the form of job networks, a lower likelihood of social involvement may further impede displaced workers' ability to secure comparable reemployment. More broadly, social participation is important to the effective functioning of our society; declines in participation among particular groups of individuals deserve continued careful consideration.

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Table 1

Descriptive Statistics of Pre-displacement and Mediating Variables

	Non-Displaced 1975–93		Displaced 1975–93		Non-Displaced 1993–04		Displaced 1993–04	
Variables	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Pre-Displacement								
Sex	.48	.50	.49	.50	.50	.50	.49	.50
Log Parents' Income	8.66	.57	8.65	.60	8.66	.56	8.67	.60
Mental Ability	103.04	14.39	102.99	14.85	103.19	14.57	102.99	14.20
Educational Attainment*	13.64	2.31	13.29	2.01	13.67	2.32	13.33	2.04
Employer Tenure*	5.83	5.71	4.63	5.07	14.10	10.48	12.63	10.47
Occupational Status*	−.95	1.10	−1.03	1.05	−.93	1.07	−.95	1.12
Class of Worker (Private)*	.64	.48	.79	.41	.60	.49	.79	.41
Industry (Manufacturing)*	.22	.41	.30	.46	.20	.40	.30	.46
Occupation (Blue-Collar)*	.26	.44	.28	.45	.25	.43	.21	.40
Union Status*	.23	.42	.19	.39	.24	.43	.13	.34
Pension*	.61	.49	.51	.50	.68	.46	.63	.48
Marital Status*	.96	.18	.95	.22	.85	.36	.83	.38
Presence of Children*	.93	.25	.93	.25	.93	.26	.92	.27
Mediating								
Employment Status 1975	.82	.39	.81	.39	.83	.37	.82	.39
Employment Status 1993	.91	.29	.85	.36	.95	.21	.96	.20
Employment Status 2004	.44	.50	.49	.50	.48	.50	.48	.50
Hourly Wages 1975**	15.43	17.58	15.58	19.20	15.97	17.85	16.09	19.12
Hourly Wages 1993**	22.89	29.73	18.02	25.85	23.74	30.00	21.58	25.85
Hourly Wages 2004	22.32	28.03	17.47	27.27	23.38	28.62	19.35	25.57
Occupational Status 1975	.68	.77	.61	.71	.68	.78	.70	.84
Occupational Status 1993	.68	.77	.57	.64	.67	.75	.70	.82
Occupational Status 2004	.67	.75	.54	.61	.68	.74	.64	.73
Depression (CES-D) 1993	15.68	14.88	17.25	15.49	15.82	14.95	16.27	14.19

	Non-Displaced 1975–93		Displaced 1975–93		Non-Displaced 1993–04		Displaced 1993–04	
Variables	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Depression (CES-D) 2004	13.26	13.46	14.24	13.64	13.22	13.40	14.04	13.53
Self-acceptance 1993	33.23	6.11	32.35	6.36	33.15	6.15	32.87	5.98
Self-acceptance 2004	24.56	3.86	24.03	3.80	24.50	3.84	24.45	3.83
Social Reciprocity 1993	28.18	4.70	28.29	4.77	28.15	4.78	28.33	4.39
Social Reciprocity 2004	28.60	4.37	28.37	4.31	28.56	4.38	28.59	4.23
Sample Size	3617		756		3606		497	

Notes: From WLS. Occupational status is measured as the percentage of persons in the 1990 Census in an occupation/industry/class-of-worker category who earned at least $ 14.30 per hour in 1989. Depression is measured using the CES-D, range of 0–126. Self-acceptance is a seven-item index with a final range of 0–42. Social reciprocity is a 6-item index with a final range of 0–36.

* Variables pertain to 1975 for workers 1975–93, and to 1993 for workers 1993–04.

** In 2004 dollars.

Table 2

Descriptive Statistics of Dependent and Corresponding Baseline Variables

	Non-Displaced 1975–1993		Displaced 1975–1993		Non-Displaced 1993–2004		Displaced 1993–2004	
Variables	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Social Participation								
Church Groups/Attendance 1975	.65	.48	.63	.48	.65	.48	.61	.49
Church Groups/Attendance 1993	.65	.48	.59	.49	.64	.48	.64	.48
Church Groups/Attendance 2004	.62	.49	.57	.49	.61	.49	.62	.49
Charitable Organizations 1975	.10	.30	.08	.28	.10	.30	.10	.30
Charitable Organizations 1993	.38	.49	.32	.47	.38	.48	.33	.47
Charitable Organizations 2004	.40	.49	.34	.47	.39	.49	.41	.49
Youth/Community Groups 1975	.25	.43	.23	.42	.25	.43	.21	.41
Youth/Community Groups 1993	.19	.39	.15	.35	.18	.38	.16	.37
Youth/Community Groups 2004	.19	.39	.15	.35	.18	.39	.20	.40
Civic/Neighborhood Groups 1975	.26	.44	.27	.44	.26	.44	.29	.46
Civic/Neighborhood Groups 1993	.44	.50	.42	.49	.44	.50	.45	.50
Civic/Neighborhood Groups 2004	.35	.48	.33	.47	.35	.48	.35	.48
Professional Groups 1975	.22	.42	.17	.38	.23	.42	.19	.39
Professional Groups 1993	.39	.49	.32	.47	.40	.49	.36	.48
Professional Groups 2004	.22	.42	.17	.38	.23	.42	.20	.40
Social/Leisure Activities 1975	.71	.45	.68	.47	.70	.46	.70	.46
Social/Leisure Activities 1993	.60	.49	.55	.50	.59	.49	.55	.50
Social/Leisure Activities 2004	.53	.50	.48	.50	.53	.50	.53	.50
Sample Size	3617		756		3606		497	

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Table 3

Effects of Job Displacement on Selected Measures of Social Participation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Outcome	**Bivariate Displaced 1975–93**	**Bivariate Displaced 1993–04**	**Covariate Adjusted Displaced 1975–93**	**Covariate Adjusted Displaced 1993–04**	**Model 3 + Pre-Displacement Participation Displaced 1975–93**	**Model 4 + Pre-Displacement Participation Displaced 1993–04**
Church Groups/Attendance 1993	.773** (3.15)	—	.776** (3.02)	—	.772** (2.81)	—
Church Groups/Attendance 2004	.834* (2.23)	1.040 (.40)	.855† (1.88)	1.081 (.76)	.868 (1.59)	1.081 (.65)
Charitable Organizations 1993	.749** (3.39)	—	.765** (3.05)	—	.773** (2.92)	—
Charitable Organizations 2004	.781** (2.91)	1.129 (1.24)	.819* (2.30)	1.176 (1.61)	.826* (2.19)	1.275* (2.29)
Youth/Community Groups 1993	.698** (3.16)	—	.722** (2.81)	—	.728** (2.73)	—
Youth/Community Groups 2004	.735** (2.77)	1.097 (.76)	.754* (2.49)	1.163 (1.22)	.762* (2.39)	1.171 (1.23)
Civic/Neighborhood Groups 1993	.944 (.71)	—	.966 (.41)	—	.955 (.53)	—
Civic/Neighborhood Groups 2004	.927 (.90)	1.021 (.21)	.979 (.24)	1.063 (.58)	.966 (.38)	1.025 (.22)
Professional Groups 1993	.743*** (3.51)	—	.858 (1.54)	—	.869 (1.38)	—
Professional Groups 2004	.741** (2.88)	.861 (1.26)	.884 (1.09)	1.027 (.21)	.886 (1.05)	1.033 (.24)
Social/Leisure Activities 1993	.824* (2.41)	—	.829* (2.27)	—	.846* (1.99)	—
Social/Leisure Activities 2004	.817* (2.53)	.996 (.04)	.852† (1.95)	1.039 (.39)	.870† (1.67)	1.113 (1.02)
Sample Size	4373	4103	4373	4103	4373	4103

Notes: Estimates are presented as odds ratios based on logistic regression models. Numbers in parentheses are t-ratios. All measures of social participation are dichotomous with 0 indicating no involvement and 1 indicating involvement. See manuscript text for a detailed description of the outcome measures. Models 3 and 4 control for sex, mental ability, parents' income, educational attainment, employer tenure, occupational status, class of worker, industry, occupation, union status, employer-offered pension, marital status and presence of children. Independent variables (with the exception of sex, parents' income and mental ability) pertain to 1975 statuses for models examining the effects of job displacement occurring 1975 to 1993, and to 1993 statuses for models examining the effects of job displacement occurring 1993 to 2004.

† p < .10

* p <.05

** p <.01

*** p <.001 (two-tailed tests)

Table 4

Effects of Job Displacement on Selected Measures of Social Participation Controlling for Post-displacement Socioeconomic Mobility and Psychological Well-being

	Model 7	Model 8	Model 9	Model 10
Outcome	**Model 5 + Mediating SES Change Displaced 1975–93**	**Model 6 + Mediating SES Change Displaced 1993–04**	**Model 7 + Mediating Psychological Well-being Displaced 1975–93**	**Model 8 + Mediating Psychological Well-being Displaced 1993–04**
Church Groups/Attendance 1993	.783** (2.65)	—	.784** (2.62)	—
Church Groups/Attendance 2004	.869 (1.56)	1.080 (.63)	.876 (1.48)	1.080 (.64)
Charitable Organizations 1993	.781** (2.78)	—	.790** (2.64)	—
Charitable Organizations 2004	.838* (2.02)	1.273* (2.27)	.842* (1.96)	1.269* (2.23)
Youth/Community Groups 1993	.705** (2.98)	—	.706** (2.96)	—
Youth/Community Groups 2004	.737** (2.66)	1.156 (1.12)	.737** (2.65)	1.145 (1.05)
Civic/Neighborhood Groups 1993	.948 (.61)	—	.970 (.35)	—
Civic/Neighborhood Groups 2004	.982 (.21)	1.034 (.30)	.995 (.05)	1.023 (.20)
Professional Groups 1993	.911 (.91)	—	.933 (.67)	—
Professional Groups 2004	.903 (.88)	1.072 (.50)	.933 (.60)	1.073 (.50)
Social/Leisure Activities 1993	.833* (2.15)	—	.845* (1.98)	—
Social/Leisure Activities 2004	.879 (1.54)	1.096 (.87)	.893 (1.34)	1.096 (.87)
Sample Size	4373	4103	4373	4103

Notes: Estimates are presented as odds ratios based on logistic regression models. Numbers in parentheses are t-ratios. All measures of social participation are dichotomous with 0 indicating no involvement and 1 indicating involvement. See manuscript text for a detailed description of the outcome measures. Models 7 and 9 are adjusted for the same covariates as Model 5 and Models 8 and 10 are adjusted for the same covariates as Model 6. See Table 3 for the list of variables.

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$ (two-tailed tests)

Table 5

Effects of Job Displacements on Selected Measures of Social Participation, Stratified Treatment Indicator

	Model 11 Model 5 Adjustments		Model 12 Model 6 Adjustments	
Outcome	**One Displacement 1975–93**	**Two + Displacements 1975–93**	**One Displacement 1993–04**	**Two + Displacements 1993–04**
Church Groups/Attendance 1993	.794* (2.32)	.672* (1.97)	—	—
Church Groups/Attendance 2004	.873 (1.41)	.842 (.88)	1.098 (.75)	.929 (.21)
Charitable Organizations 1993	.750** (3.00)	.892 (.59)	—	—
Charitable Organizations 2004	.812* (2.22)	.902 (.54)	1.354** (2.76)	.646 (1.19)
Youth/Community Groups 1993	.664** (3.17)	1.076 (.31)	—	—
Youth/Community Groups 2004	.685** (2.99)	1.201 (.81)	1.197 (1.35)	.918 (.20)
Civic/Neighborhood Groups 1993	.945 (.61)	1.008 (.04)	—	—
Civic/Neighborhood Groups 2004	.912 (.94)	1.266 (1.22)	.990 (.09)	1.454 (1.10)
Professional Groups 1993	.843 (1.55)	1.005 (.02)	—	—
Professional Groups 2004	.888 (.95)	.877 (.52)	1.025 (.17)	1.108 (.26)
Social/Leisure Activities 1993	.859† (1.69)	.782 (1.31)	—	—
Social/Leisure Activities 2004	.903 (1.14)	.723† (1.73)	1.097 (.85)	1.283 (.77)
Sample Size	4373		4103	

Notes: Estimates are presented as odds ratios based on logistic regression models. Numbers in parentheses are t-ratios. All measures of social participation are dichotomous with 0 indicating no involvement and 1 indicating involvement. See manuscript text for a detailed description of the outcome measures. Model 11 is adjusted for the same covariates as Model 5 and Model 12 is adjusted for the same covariates as Model 6. See Table 3 for the list of variables.

† p <.10

* p <.05

** p < .01

*** p < .001 (two-tailed tests)

Table 6

Effects of Job Displacements on Selected Measures of Social Participation, Stratified Treatment Indicator: Conditional Logistic Regression

	Model 13		Model 14	
Outcome	**One Displacement 1975–93**	**Two + Displacements 1975–93**	**One Displacement 1993–04**	**Two + Displacements 1993–04**
Church Groups / Attendance 1993	.738† (1.81)	.870 (.46)	—	—
Sample Size:	1167			
Church Groups / Attendance 2004	.849 (1.04)	1.023 (.06)	1.080 (.35)	1.054 (.08)
Sample Size:	1304		881	
Charitable Organizations 1993	.938 (.27)	1.013 (.03)	—	—
Sample Size:	1555			
Charitable Organizations 2004	.928 (.33)	1.043 (.09)	1.783** (3.04)	1.142 (.22)
Sample Size:	1643		1286	
Youth / Community Groups 1993	.718* (1.98)	1.598 (1.44)	—	—
Sample Size:	1317			
Youth / Community Groups 2004	.684* (2.18)	1.700† (1.66)	1.363 (1.45)	.582 (.74)
Sample Size:	1327		905	
Civic / Neighborhood Groups 1993	.906 (.61)	.841 (.50)	—	—
Sample Size:	1581			
Civic / Neighborhood Groups 2004	.865 (.94)	1.026 (.07)	.854 (.80)	1.524 (.69)
Sample Size:	1459		1221	
Professional Groups 1993	.922 (.36)	1.364 (.57)	—	—
Sample Size:	1109			
Professional Groups 2004	1.120 (.56)	.952 (.13)	1.159 (.57)	—
Sample Size:	940		1060	
Social / Leisure Activities 1993	.946 (.37)	.929 (.24)	—	—
Sample Size:	1617			
Social / Leisure Activities 2004	1.012 (.08)	.864 (.48)	1.225 (1.19)	2.278 (1.27)
Sample Size:	1760		1330	

Notes: Estimates are presented as odds ratios based on conditional logistic fixed effects models. Numbers in parentheses are t-ratios. All measures of social participation are dichotomous with 0 indicating a change from involvement to no involvement and 1 indicating a change from no involvement to involvement.

† p < .10

* p <.05

** p <.01

*** p <.001 (two-tailed tests)