



Individual and Community
Economic Mobility in the
Great Recession Era:
The Spatial Foundations of
Persistent Inequality

ROBERT J. SAMPSON
Harvard University

Revised version of paper originally presented at the Federal Reserve conference on Economic Mobility, April 2, 2015, Washington, D.C. This research draws from work with Robert Mare, Kristin Perkins, and Jared Schachner. Financial support is gratefully acknowledged from the Hymen Milgrom Supporting Organization to the University of Chicago. Direct all correspondence to Robert J. Sampson, rsampson@wjh.harvard.edu.

The views expressed in this article are those of the author and do not represent an endorsement by the Federal Reserve Bank of St. Louis or the Federal Reserve System.

nce relegated to debates in the halls of academe, it is now common knowledge that income inequality is increasing. Most of the attention has focused on the pulling away of the very rich—the so-called “one percent” whose gains have far outpaced those of everyone else (Piketty 2014). But academic and public concerns go well beyond the very top. The hollowing out of the middle class, stagnation of wages, and recent evidence on the lack of upward mobility across generations all strike at the very heart of the American ideal. In one widely reported study, the odds of a child from a poor family climbing up the income ladder to reach the top fifth of the income bracket as an adult were less than 10 percent for the nation (Chetty et al. 2014b).

Less debated but no less consequential is the fact that individuals are born into, grow up in, and become adults in neighborhoods that are also highly unequal. Concentrated poverty, violence, and poor school quality, for example, tend to cluster together at the neighborhood level and influence life chances across a variety of outcomes. It follows that equal attention should be paid to community-level inequality. In particular, individual transitions into and out of neighborhood poverty and the distribution of neighborhood income status over time are fundamental to understanding the nature of income inequality and the impact of neighborhood contexts on individual outcomes. Yet surprisingly little is known about stability and change in the spatial foundations of neighborhood inequality, especially the movement of individuals across different income environments over crucial periods of the life course and historical eras.

This paper addresses these challenges by reporting results from a new long-term project that combines the study of neighborhood change across the United States with an original longitudinal study of individuals in two American cities that are very different in urban form and history: Chicago and Los Angeles. The paper addresses two basic questions: (1) how mobile are neighborhoods, and (2) how mobile are individuals across neighborhood income types? At the neighborhood level (question 1), stability and change in economic status are examined across two decades for all urban neighborhoods in the United States, and neighborhood-level changes in economic status are examined specific to Chicago and Los Angeles. The paper assesses whether patterns of neighborhood mobility were similar throughout the last two decades, or whether they differ between the relatively prosperous 1990s and the Great

Recession era. In both cities and for the nation as a whole, the data show that neighborhood income status is surprisingly persistent at the extremes.

At the individual or contextual level (question 2), who moves up versus down the neighborhood income ladder is examined, as well as how the mobility of individuals across neighborhood income status varies by race, socioeconomic factors, individual characteristics, life-cycle change, and the shock of the Great Recession. Analogous to individual mobility studies, this paper examines how common is it for children who grew up in a poor neighborhood to attain a higher-income neighborhood in adulthood. An essential American notion is that individuals can triumph over circumstance and that individuals, including the poor, can always move to a better neighborhood—what can be thought of as upward contextual mobility (Sharkey 2013, 16). In this view of neighborhood mobility, individual characteristics govern escape from neighborhood poverty. Assessing this claim with data on neighborhood economic attainment among individuals, based on longitudinal studies from Los Angeles and Chicago, the evidence leads to the same conclusion: upward contextual mobility in neighborhood economic status is relatively rare and governed by a structure of stratification that is persistent and strongly linked to race. Legacies of neighborhood inequality are thus more resilient than commonly assumed and call into question policies that unduly focus on individual mobility or that ignore the unique contextual environments that blacks have historically endured in the United States.

The following section briefly reviews the literature that motivates the focus on neighborhood-level inequality and describes the data and measures before presenting the key findings. The concluding section synthesizes the main results and probes their implications for whether and how policies should intervene in the lives of individuals (e.g., housing vouchers) or at the scale of communities (e.g., place-based interventions), including the question of whether “affirmative action for neighborhoods” is needed.

The Spatial Foundations of American Inequality

Over 50 years ago the urbanist Lewis Mumford claimed, “Neighborhoods, in some primitive, inchoate fashion exist wherever human beings congregate” (1954, 258). The contemporary archaeologist Michael Smith (2010, 137) finds broad empirical support for this claim, arguing that the “spatial division of cities into districts or neighborhoods is one of the few universals of urban life from the earliest cities to the present” (see also Smith et al. 2014). The salience of neighborhood difference has persisted across long-time scales and historical eras despite the transformation of specific boundaries, political regimes, and

the layout of cities. The fact of neighborhood differentiation from ancient cities to the present suggests that spatial arrangements constitute a fundamental organizing dimension of social inequality (Sampson 2012, 362).

There is a large body of research that supports this idea using a variety of empirical definitions of urban neighborhood, which can be conceptualized as a geographical subsection of a larger city or region that has socially distinctive characteristics (Sampson 2012, 53–57). Some examples of the operational units that researchers have used to measure neighborhood characteristics include city block groups, census tracts, city planning or health districts, political wards, and locally defined community areas. It is beyond the scope of this paper to summarize the voluminous research on neighborhoods using these various units, but there is widespread consensus that there is considerable social inequality between neighborhoods, especially in terms of socioeconomic position and racial/ethnic segregation (Massey and Denton 1993; Sampson 2012, 31–49).

There is less consensus on the status of neighborhood effects on outcomes like economic achievement, health, and crime. A major worry is the possibility that the estimated effects of factors like concentrated poverty instead reflect the effects of prior family characteristics or individual choices. For example, individuals may systematically select high-income neighborhoods based on the same characteristics that also predict positive adult outcomes (e.g., family income, parental education, home ownership), leading to spurious associations. Observational studies have been criticized for such “selection bias” (Mayer and Jencks 1989). In addition, evidence from the “Moving to Opportunity” (MTO) randomized voucher experiment in five cities (Ludwig et al. 2012; Sanbonmatsu et al. 2011) has cast doubt on the causal role of neighborhood poverty on adolescent outcomes and young adult achievement.

Comprehensive reviews of the literature have nonetheless identified credible evidence of the deleterious effects of concentrated disadvantage on a number of individual outcomes relevant to understanding economic mobility, especially with respect to longer-term or developmental neighborhood influences (see e.g., Galster et al. 2007; Galster 2011; Leventhal and Brooks-Gunn 2000; Sampson 2012; Sharkey and Faber 2014). For example, Wodtke, Harding, and Elwert (2011), Wodtke (2013), and Sharkey and Elwert (2011) find that living in a disadvantaged neighborhood has negative effects on high school graduation and cognitive ability, with longer durations of exposure to concentrated disadvantage associated with more negative outcomes. Sampson et al. (2008) find that growing up in severe disadvantage attenuates the learning of verbal skills, approximately equivalent to losing a year in school, and Sharkey (2010) finds that exposure to neighborhood violence depresses test scores. Using national-level U.S. data on income mobility, Chetty and colleagues

(2014a) report that the odds of intergenerational income mobility vary sharply by geography. High mobility places, such as San Jose and Salt Lake City, are characterized by less neighborhood segregation, less income inequality, better primary schools, greater “social capital,” and greater family stability.

There is also experimental evidence of long-term neighborhood effects on adult income attainment. A recent study of the MTO participants found that voucher-induced moves to a lower-poverty neighborhood during childhood are associated with higher adult earnings and that the magnitude of this effect declines with age, eventually flattening out to no effect among those who were adolescents at the time of moving (Chetty, Hendren, and Katz 2015). This pattern strongly suggests that the duration and timing of exposure to concentrated poverty is important for later adult outcomes, especially upward economic mobility. Moreover, when researchers compared the MTO voucher study to observational studies obtained from the same city, they found convergent negative effects of concentrated poverty on cognitive skills that were larger for those children who moved out of the most severely disadvantaged environments (Burdick-Will et al. 2011). Comparing across MTO sites, children’s test scores were also found to improve the most when residential changes led to major reductions in exposure to violent crime.

In sum, although causality is rarely definitive in the social sciences—even in randomized experiments (Sampson 2008)—prior research provides strong motivation for prioritizing the study of neighborhood economic mobility. Indeed, the evidence showing that neighborhood poverty inhibits verbal learning and high school graduation commands our attention if we are concerned about economic mobility. It is not only upward or downward neighborhood mobility that is at stake, but the interrelated components of human and social capital that undergird such mobility. The project described in the next section permits a direct examination of stability and change in the spatial foundations of neighborhood inequality and the movement of individuals across different income environments over crucial periods of the life course.

The Mixed-Income Project

The Mixed-Income Project (MIP) is a longitudinal and probability-based study that followed individuals from Los Angeles and Chicago and tracked their residential histories. The two anchor studies for the MIP are the *Project on Human Development in Chicago Neighborhoods* (PHDCN) and the *Los Angeles Family and Neighborhood Survey* (L.A.FANS, hereafter LAFANS). The PHDCN and LAFANS are widely recognized for rich longitudinal data on neighborhoods and on educational, health, and behavioral outcomes. The MIP

was designed to study individual and neighborhood dynamics and to permit comparison of a newer Southwest city (Los Angeles) fundamentally different in urban form and composition than the older “Rust Belt” context exemplified by Chicago. In particular, Los Angeles is characterized by more suburban sprawl and less racial segregation than Chicago. Further details on the sampling design and rationale for the two study sites are provided in related papers (Perkins and Sampson 2015; Sampson, Mare, and Perkins 2015a; Sampson, Schachner, and Mare 2015b).¹

Measures and Strategy

This paper examines and compares two measures of neighborhood income status—median family income at the census tract level and the degree of mutual exposure of lower- and higher-income persons within a census tract.

The first measure, median family income at the census tract level, is a summary indicator of neighborhood quality and resource potential with the added benefit of a clear metric—the dollar. Each tract in the United States and within Los Angeles County and Chicago’s Cook County is assigned to a median family income quintile with cut points based on all U.S. census tracts within counties that are at least partly within a metropolitan statistical area at four points in time: Census 1990, Census 2000, American Community Survey (ACS) 2005–09 and ACS 2008–12.² This approach enables neighborhood trajectories to be tracked relative to each other and relative to the national distribution simultaneously.

- 1 Briefly, the PHDCN is based on a probability-based sample of children and caretakers assessed starting in 1995 and again in two follow-ups at approximately two and a half year intervals, ending in the early 2000s (wave 3). In 2012–13, the Chicago Mixed-Income Project (MIP) traced and re-interviewed randomly sampled participants last contacted at wave 3 of PHDCN in the original birth cohort and the age 9–15 cohorts. Despite the long time that elapsed since last contact at wave 3 and the contemporary setting, the MIP fourth wave achieved a response rate of 63 percent of eligible cases overall (1,057 respondents). The analyses in this paper focus on the 9-, 12-, and 15-year-old cohorts who transitioned to young adulthood (ages 26–32) by 2013. LAFANS is also a probability-based sample of both children and adults assessed at two waves (1999 and 2007). The third wave MIP follow-up in 2012–13 achieved a final response rate of 76 percent of eligible participants for a combined sample of 1,032. Addresses were geocoded at each wave and matched to census data from 1990, 2000, and the American Community Surveys (2005–12).
- 2 Median family income quintile cutoff points are based on national metropolitan statistical area (MSA) census tracts (excluding Puerto Rico and tracts with family populations below 50)—rather than all census tracts (i.e., including rural areas)—because they better reflect the urban and suburban contexts of theoretical interest. MSAs also constitute a more accurate basis of comparison for Los Angeles and Chicago areas, which are particularly urbanized.

The second measure is the degree of mutual exposure of lower- and higher-income persons within a census tract. The Index of Concentrated Extremes (ICE) = $\frac{A_i - P_i}{T_i}$, where A is the number of affluent residents in neighborhood i , P is the number of poor residents, and T is the total number of residents.

ICE can range from -1 (all residents are poor) to 1 (all residents are affluent).³ Greater income mixing or a more even balance of the poor and affluent, typically in middle class areas, is centered on zero. As with median income, neighborhood transitions are examined across nationally determined ICE quintiles.

At the individual level in Los Angeles, mobility tables are described for changes in median family income and ICE quintiles of respondents' neighborhoods between Census 2000 and ACS 2008–12, aligned with LAFANS wave 1 and the MIP survey. For Chicago, census measures from 1990 and 2000 were interpolated to the year of interview for waves 1–2, and the ACS 2008–12 for wave 4. The focus on quintiles comports with prior research on income mobility at the individual level (Chetty et al. 2014a) and neighborhood level (Sampson et al. 2015a). The study design permits the comparison of two phases of the life course at the individual level: the transition to young adulthood and the period of middle adulthood. Specifically, this paper examines 670 children and early adolescents (9–15, average age of 12) in Chicago who transitioned to young adulthood over the course of the study. By 2012, the Chicago adolescents were between the ages of 26 and 32. The mobility transition is thus from the social origins of the parental or home neighborhood when growing up to the neighborhood in which the individual resides as an adult (cf. Hout 2015). In Los Angeles, the focus is on middle adulthood, looking at neighborhood income trajectories of adults (with and without children) from the initial LAFANS wave 1 interview that were confirmed to reside within L.A. County during their wave 2 and MIP interviews. The analytic file of 635 randomly selected adults were about 40 at baseline. In both samples, the data are weighted to reflect the sampling design and potential attrition bias.

Taken together, the MIP research designs for Chicago and Los Angeles, combined with a national-level picture of neighborhood income mobility, offer a unique vantage point for addressing the theoretical questions of this paper.

1. Necessary information is gained on the large-scale structural changes that shape individual lives and choices by focusing on neighborhood-level transitions, both nationally and in Chicago and Los Angeles.

3 Operationally, the national upper- and lower-income quintiles of family income are used as the cutoffs for affluent and poor families, respectively. ICE scores were assigned each year from 1990 to 2010 (using interpolation) at the census tract level in the Chicago area and for all neighborhoods in the United States. The ICE measure thus controls for shifting income distributions over time (Sampson et al. 2015a, 161).

2. The MIP is based on coordinated representative samples, in contrast to samples that are selected on the outcome of interest, such as neighborhood income attainment.
3. The longitudinal data are rich in detail, measuring a wealth of similar information on both individual background characteristics and transitions over the life course. In Chicago, the data span a considerable period of the adolescent and young adult life course—approximately 18 years for three age cohorts—and in Los Angeles, the data span a dozen years across middle adulthood.
4. The research design permits examination of pre- and post-Great Recession measures of income at both the individual and neighborhood levels.
5. Both sampling designs capture well the racial and ethnic diversity of the United States and how cities have changed, including a significant representation of first- and second-generation immigrants.

Community-Level Transitions

Table 1 presents the mobility rates for all (50,000+) metropolitan neighborhoods in the United States. Panel 1 shows considerable persistence in income segregation. Just over 80 percent of neighborhoods in the United States that were in the bottom or top quintile of neighborhood median income in 1990 remained there in 2000. Similarly, in the decade of 2000–10 there was a persistent rate of over 75 percent for low-income neighborhoods and virtually no change in the probability that affluent neighborhoods retain their status (approximately 80 percent). There is little upward or downward mobility across the decades, despite widespread reports of gentrification in recent decades. For example, less than 3 percent of neighborhoods nationwide in the bottom two categories of income moved above the 60th percentile of income in either decade. Only a handful of neighborhoods rose from the bottom fifth to the top fifth. Downward mobility of neighborhoods is extremely rare too, even in the decade of the Great Recession, when change mainly took place in the middle of the income distribution. Roughly half of middle-income neighborhoods stayed in the middle category, with mobility more or less evenly split between upward and downward movement in both decades. Table 2 demonstrates that the basic patterns do not change when transitions in concentrated extremes of income (ICE) are examined.

This paper also examines neighborhood-level transitions for the counties that contain Chicago and Los Angeles, the sites of the individual-level

MIP data. In both areas, there is a similar persistence of concentrated-poverty neighborhoods (the first quintile group of ICE), at over 70 percent. As with the United States as a whole, relatively few neighborhoods upgrade from the bottom two quintiles to above the 60th percentile—“stickiness” is the general rule, particularly at the extremes of the distribution. Somewhat surprisingly, these inertial tendencies are even stronger at the neighborhood level in Los Angeles than what many consider the epitome of neighborhood inequality in Chicago. For example, 77 percent of Chicago neighborhoods in the top quintile remained in place between 2000 and 2010 (the midpoint of the 2008–12 ACS), whereas in Los Angeles the persistence rate reached 87 percent among the highest quintile neighborhoods. Neighborhood inequality in Los Angeles thus appears more rigid in comparison to Chicago and to the United States as a whole (Sampson et al. 2015b), a pattern that is also seen in figure 1, which plots pre- and post-Recession ICE values.

There is more fluidity in the middle of the income distribution in both cities compared to the United States. In Chicago, only 37 percent of neighborhoods remained mixed- to middle-income over the decade, and approximately 45 percent of mixed- to middle-income neighborhoods lost ground over the decade. Los Angeles neighborhoods show a somewhat different pattern, where the mixed- to middle-income category has a persistence rate of 47 percent and more of the middle moved up than lost ground. Overall, though, especially including the decade of the 1990s, middle-income neighborhoods are tenuous, showing more fragility and hollowing out (Sampson et al. 2015b). The basic picture, then, is one of rigidity at the extremes and vulnerability or precariousness in the middle.

Individual-Level Transitions

This section shifts from the neighborhood to the individual as primary unit of analysis but retains the analytic focus on change. Do individuals remain within their initial neighborhood income status, or is there substantial upward and downward mobility over the course of the study? Table 3 shows the transition matrix of individual exposure to neighborhood income environments (ICE) over a 13-year period (2000 to 2013) in the LAFANS-MIP sample of adults, and over 18 years for the transition to young adulthood in Chicago. Parallel to the previous analyses, neighborhood ICE and income measures are based on nationally determined quintiles.⁴

The data reveal that there is more mobility of individuals across neighborhood income groups than there is change in neighborhoods over time for both

4 All estimates employ analytic weights to correct for the stratified sample design and potential attrition bias over the course of the follow-up. For further details and results, see Sampson et al. (2015a,b).

Table 1. Neighborhood-level mobility in median family income, 1990 to 2000 and 2000 to 2008–12: United States, excluding Puerto Rico

A.		1990 MEDIAN FAMILY INCOME QUINTILES					
		1	2	3	4	5	TOTAL
2000 income quintiles	1	8,059	1,856	193	25	4	10,137
		80.15	18.36	1.91	0.25	0.04	20.06
2	2	1,747	5,700	2,344	343	21	10,155
		17.37	56.39	23.14	3.39	0.21	20.09
3	3	181	2,237	5,315	2,270	151	10,154
		1.80	22.13	52.48	22.41	1.49	20.09
4	4	50	252	2,099	5,908	1,774	10,083
		0.50	2.49	20.72	58.33	17.53	19.95
5	5	18	63	177	1,582	8,172	10,012
		0.18	0.62	1.75	15.62	80.74	19.81
Total		10,055	10,108	10,128	10,128	10,122	50,541
		100	100	100	100	100	100
B.		2000 MEDIAN FAMILY INCOME QUINTILES					
		1	2	3	4	5	TOTAL
2008–12 income quintiles	1	7,727	2,124	249	28	5	10,133
		76.26	20.96	2.46	0.28	0.05	19.96
2	2	1,943	5,287	2,584	338	12	10,164
		19.12	52.02	25.42	3.33	0.12	20.02
3	3	311	2,303	4,992	2,395	159	10,160
		3.06	22.67	49.13	23.57	1.56	20.01
4	4	79	342	2,116	5,779	1,851	10,167
		0.78	3.36	20.81	56.84	18.20	20.03
5	5	45	103	218	1,628	8,145	10,139
		0.44	1.02	2.15	16.06	80.07	19.97
Total		10,105	10,159	10,159	10,168	10,172	50,763
		100	100	100	100	100	100

Note: Cell entries are the number of cases and column percent, respectively; only census tracts with family populations above 50 in 1990 (N=50,667), 2000 (N=50,887) and 2008–12 (N=50,959) are included.

Table 2. Neighborhood-level mobility in ICE (index of concentrated extremes), 1990 to 2000 and 2000 to 2008–12: United States, excluding Puerto Rico

A.		1990 MEDIAN FAMILY INCOME QUINTILES					
		1	2	3	4	5	TOTAL
2000 ICE quintiles	1	8,134	1,821	164	20	3	10,142
		80.81	18.00	1.62	0.20	0.03	20.07
2		1,729	5,800	2,312	300	19	10,160
		17.18	57.34	22.86	2.96	0.19	20.10
3		158	2,219	5,347	2,270	146	10,140
		1.57	21.94	52.86	22.43	1.44	20.06
4		32	225	2,125	5,880	1,828	10,090
		0.32	2.22	21.01	58.10	18.06	19.96
5		13	50	167	1,651	8,128	10,009
		0.13	0.49	1.65	16.31	80.28	19.80
Total		10,066	10,115	10,115	10,121	10,124	50,541
		100	100	100	100	100	100
B.		2000 MEDIAN FAMILY INCOME QUINTILES					
		1	2	3	4	5	TOTAL
2008–12 ICE quintiles	1	7,799	2,091	232	17	3	10,142
		77.13	20.58	2.28	0.17	0.03	19.98
2		1,908	5,411	2,515	317	9	10,160
		18.87	53.27	24.75	3.12	0.09	20.01
3		292	2,292	5,096	2,355	125	10,160
		2.89	22.56	50.14	23.18	1.23	20.01
4		91	303	2,132	5,788	1,845	10,159
		0.90	2.98	20.98	56.97	18.14	20.01
5		21	61	188	1,683	8,189	10,142
		0.21	0.60	1.85	16.56	80.51	19.98
Total		10,111	10,158	10,163	10,160	10,171	50,763
		100	100	100	100	100	100

Note: Cell entries are the number of cases and column percent, respectively; only census tracts with family populations above 50 in 1990 (N=50,667), 2000 (N=50,887) and 2008–12 (N=50,959) are included.

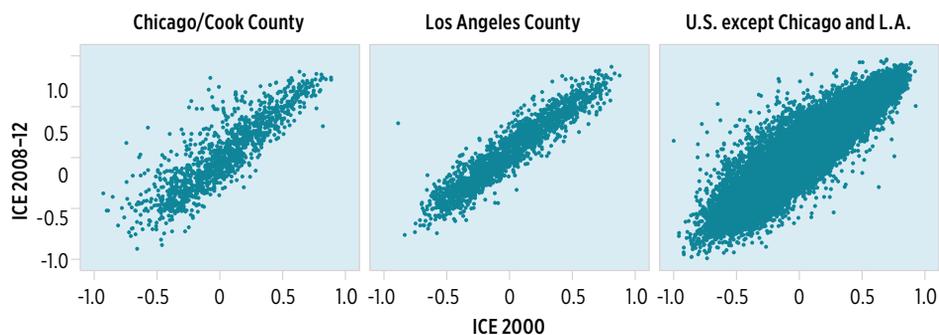
Table 3. Individual-level transitions in exposure to income extremes (ICE), Chicago (1995–2013) and Los Angeles MIP samples (2000 to 2013)

A.		CHICAGO WAVE 1 ICE QUINTILES					
		1	2	3	4	5	TOTAL
Wave 4 ICE quintiles	1	140	50	30	6	4	229
		60.56	34.42	18.89	5.66	11.08	34.14
	2	53	35	46	18	2	155
		23.17	24.36	29.27	17.5	6.24	23.06
	3	23	36	33	15	3	109
		9.96	24.65	20.76	14.79	7.76	16.27
	4	9	14	26	35	12	97
		3.99	9.73	16.69	34.61	33.53	14.46
	5	5	10	23	28	15	81
		2.32	6.84	14.39	27.45	41.39	12.07
Total		231	145	157	101	37	671
		100	100	100	100	100	100
B.		LOS ANGELES WAVE 1 ICE QUINTILES					
		1	2	3	4	5	TOTAL
Wave 3 ICE quintiles	1	112	13	1	2	0	128
		59.98	12.02	1.36	3.04	0.00	21.00
	2	38	73	29	11	9	160
		20.17	65.50	33.50	14.85	6.08	26.18
	3	23	20	33	10	3	88
		12.11	17.51	37.89	13.75	2.07	14.44
	4	12	2	23	32	40	109
		6.48	2.04	26.35	42.48	26.25	17.84
	5	2	3	1	20	100	126
		1.26	2.94	0.91	25.89	65.60	20.55
Total		186	112	86	76	152	612
		100	100	100	100	100	100

Note: Cell entries are the number of cases and column percent, respectively.

Source: Panel A is reproduced from Sampson, Mare, and Perkins (2015) and Panel B is reproduced from Sampson, Schachner, and Mare (2015).

Figure 1. Relationship pre- and post-recession for ICE (index of concentrated extremes in income): Chicago/ Cook County, Los Angeles County, and the United States, excluding Puerto Rico, 2000 to 2008/2012



Chicago and Los Angeles. Yet there are distinct patterns of stability and change, with some unexpected patterns. For younger adults in Chicago, for example, there is more downward mobility and more individuals in the lower quintile group compared to Los Angeles. Even so, almost 75 percent of adolescents in Chicago who grew up in the highest-income neighborhoods (the top fifth) remained either at the top or in the second-highest income group. The basic message is that retention of neighborhood income status is considerable even for the highly mobile and unstable period of young adulthood. Indeed, only 11 percent of the Chicago sample starting out with advantage is downwardly mobile in the sense of ending up in the lowest quintile. In Los Angeles, a remarkable 90 percent of middle-adulthood respondents who lived in upper-income neighborhoods stayed at or near the top. At the other end of the distribution, remaining in poverty is also similar and substantial in both cities despite the age and follow-up differential: 60 percent of individuals in both Los Angeles and Chicago were in the bottom quintile of neighborhood ICE at the beginning and end of the study. And in both cities, fewer than 3 percent of individuals in the bottom neighborhood-income group climbed to the top by the end of the follow-up; under 10 percent rose to the fourth income group.

Moreover, in both cities, and similar to the neighborhood-level findings, fluidity in the middle of the income distribution is common. Less than a quarter of young adults in Chicago and 38 percent of adults in Los Angeles lived in the middle-income category at both time points, and in both cities a significant proportion of those starting out in mixed- to middle-income neighborhoods lost ground—over a third in Los Angeles and almost half in Chicago. Similar results

were obtained for mobility across median income groups, although there is more downward mobility for adolescents in Chicago. Despite the vast differences in the life cycle of the samples and urban structure between Los Angeles and Chicago, the data reinforce a common picture of persistence at the extremes and fluidity in mixed- to middle-income residential exposure at the individual level.

Individual Differences and Contextual Mobility

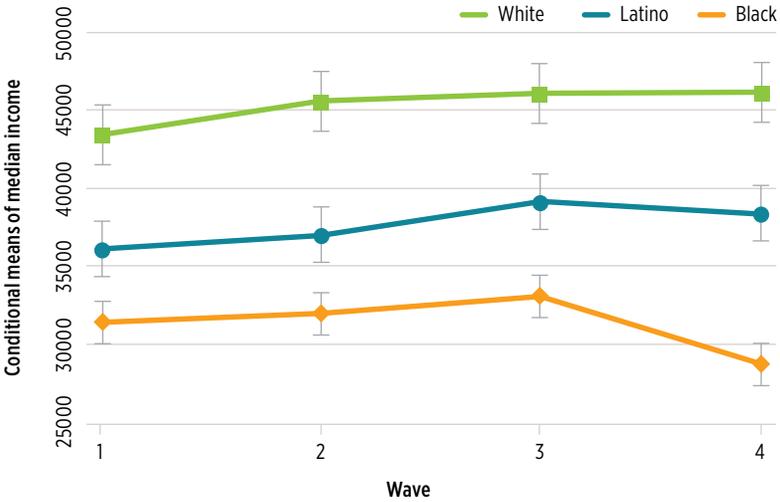
The findings to this point underscore the spatial persistence of neighborhood inequality, but a set of critical questions remains for the goal of better linking neighborhood and individual life-course processes of economic mobility. Do the background characteristics or changing life circumstances of individuals alter trajectories of neighborhood economic status? As noted in the introduction, there are strong theoretical reasons to expect that class, educational, and family factors explain who ends up in poor or rich neighborhoods and may therefore alter pathways of contextual mobility. Residential mobility is also a factor of theoretical relevance: does accounting for movers and stayers alter the inertial tendencies observed thus far?

Another critical question given past research is how economic mobility patterns differ by race and ethnicity. In particular, we know that blacks and whites live in different neighborhood environments (Sampson 2012; Sharkey 2013), but much less about whether background or life-course characteristics explain the differential exposure to neighborhood inequality over the life course and against the backdrop of the Great Recession. We also know very little about Latino trajectories of exposure to different income environments over the life course.

This section addresses these questions by examining trajectories of neighborhood income exposure in both Chicago and Los Angeles. A series of models are analogous in specification, bearing in mind the life-stage differences of adolescents in Chicago and middle-age adults in Los Angeles. For each site, mixed-effect regression models of time-varying median income and ICE are estimated by race/ethnicity that control for the person-specific characteristic of age, sex, and length of residence in neighborhood at baseline, in addition to residential mobility over time.⁵ A set of background characteristics assessed at

5 Specifically, mixed-effect or hierarchical linear models are estimated that account for moving across tracts, a within-person error term, and a person-specific error term. Later Chicago analysis expands residential mobility to adjust for both moving across tracts and moving out of the city of Chicago over the course of the follow-up. LAFANS analysis also controls for moving across tracts, but the Los Angeles vs. county distinction is not comparable to the Chicago sample, so later models control for moving out of the central core of Los Angeles instead. For discussion of mover-stayer results see Sampson et al. (2015b).

Figure 2. Chicago median-income trajectories of young adulthood MIP sample by race/ethnicity, adjusting for age, sex, length of residence, residential mobility, immigrant generation, education, employment, family income, HH size, homeowner, and marital status (95 percent CI)

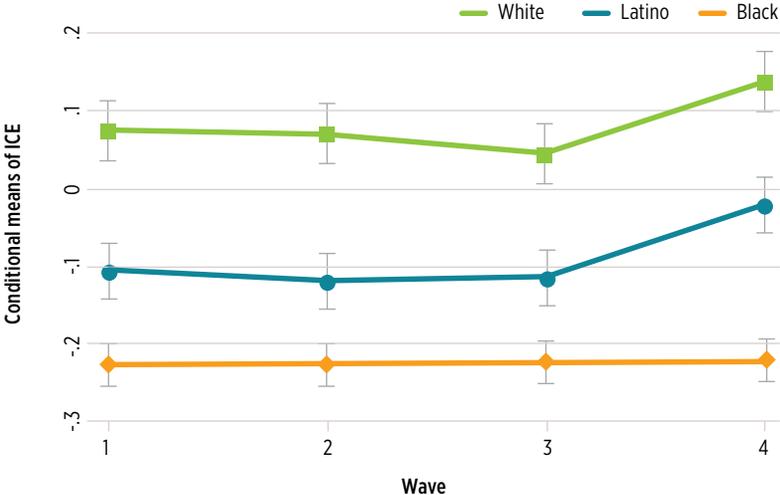


wave 1 referring to the parents of the Chicago adolescences and the adults in Los Angeles control for

- immigrant generation (first- and second-generation),
- education,
- employment,
- family income,
- household size,
- home ownership, and
- marital status.

For example, family income in Chicago means the income of the family of origin at wave 1 for the adolescents (ages 9–12). In Los Angeles, family income refers to the person him or herself plus other family members at wave 1.

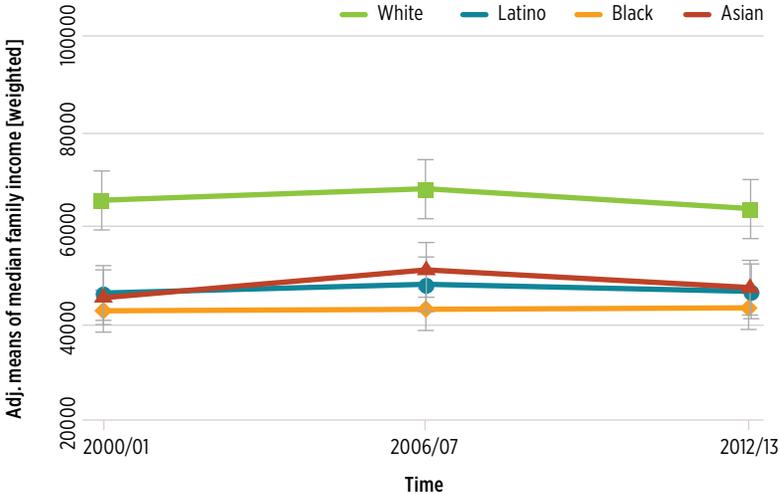
Figure 3. Chicago ICE trajectories of young adulthood MIP sample by race/ethnicity, adjusting for age, sex, length of residence, residential mobility, immigrant generation, education, employment, family income, HH size, homeowner, and marital status (95 percent CI)



This analytic strategy allows for questioning how Chicago adolescents fare in neighborhood economic mobility during the transition to young adulthood, adjusting for major differences in family social origins (see Hout 2015) and residential mobility. In Los Angeles, the strategy allows for questioning whether how well middle-age adults fare is conditional on their status in younger adulthood at the point where the Chicago sample leaves off (age 28 on average) and their later residential mobility. Overall, this strategy thus permits a cross-cohort look at individual and neighborhood economic mobility, with a focus on pre- and post-Great Recession outcomes by race/ethnic inequality.

The results in figures 2 to 5 paint a clear picture. Despite differences in age cohort, length of follow-up period, and measurement differences, a major finding is that white privilege in neighborhood status is maintained after controlling for the classic mobility-related features of individual background and residential mobility, in addition to the macro effects of the Great Recession. Whites enjoy a substantial advantage when it comes to neighborhood

Figure 4. Los Angeles median-income trajectories of middle adulthood MIP sample by race/ethnicity, adjusting for age, sex, length of residence, residential mobility, immigrant generation, education, employment, family income, HH size, homeowner, and marital status (95 percent CI)

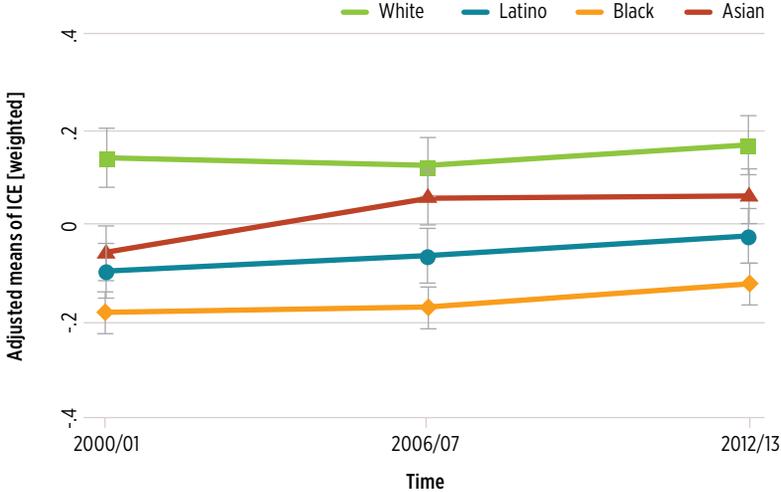


economic status, with a dollar difference compared to blacks of at least \$15,000 in median income in each city and a gap in ICE scores of over a standard deviation in Chicago and nearly a standard deviation in Los Angeles. In Chicago, black adolescents also appear particularly hard hit by the Great Recession. The decline in neighborhood income for blacks compared to whites from wave 3 to wave 4 is statistically significant and amounts to nearly \$5,000 (figure 2); by contrast, whites were impervious to the shock of the recession and the slight decline for Latinos is not significant.⁶ At the upper end, white and Latino adolescents increased their exposure to concentrated affluence from wave 3 to wave 4, but the ICE value for blacks remained flat (figure 3).

Adults in Los Angeles are better off overall than young adults in Chicago with respect to average neighborhood income and concentrated affluence (figures 4–5), and they were seemingly unaffected by the Great Recession. But this

6 Further analysis by Perkins and Sampson (2015) reveals that increases in neighborhood poverty among non-poor blacks between wave 3 (ending by 2002) and wave 4 (ending in 2013) occur primarily after the Great Recession, not between 2002 and 2007.

Figure 5. Los Angeles ICE trajectories of middle adulthood MIP sample by race/ethnicity, adjusting for age, sex, length of residence, residential mobility, immigrant generation, education, employment, family income, HH size, homeowner, and marital status (95 percent CI)



pattern is somewhat expected because adults have had a longer time to advance in their careers and have more resources than adolescents to cushion against the recession. Note, too, that Latinos in Los Angeles are closer to blacks in their contextual mobility trajectories, and that Asians, while a relatively small group, fare quite well compared to whites in neighborhood economic status. Still, the white-black gap is large in both cities and cannot be explained away in terms of background characteristics.

Moving Up?

The question of upward mobility has generated intense debate in the United States of late, but largely in terms of individual income changes across generations (Chetty et al. 2014b). Contrasting questions of what the legacy of initial neighborhood poverty is and what factors predict changes in contextual economic mobility can be answered by estimating the linear change in median income and ICE from origin to destination in addition to logistic regression

models of movement from the lower quintile of neighborhood income and ICE at the upper quintile.

There is evidence of the path dependence of initial neighborhood economic level—where you end up living is contextually shaped. Conditional on starting position, blacks continue to see large deficits in the odds of upward mobility despite controlling for social and residential mobility. Moreover, individual differences play a subdued role once initial conditions are controlled; in Chicago, none of the background or individual social origin predictors attain significance in the transition to young adulthood (e.g., parental income, education, household size, immigrant status, and even residential mobility). For adults in Los Angeles, higher income respondents do see a boost in neighborhood incomes, and factors such as homeownership and marital status play a role, but overall the driving factors are initial position and race/ethnicity.

Figure 6 summarizes selected results for linear models of median income where a dollar value can be attached to race/ethnic categories and prior neighborhood status. The data reveal an interesting city pattern consistent with the idea that the black “penalty” for changes in neighborhood income status over time is larger in Chicago than in Los Angeles by a considerable degree. Adjusting for wave 1 neighborhood income and the usual suspects that are posited in prior research to account for income mobility, black young adults in Chicago live in neighborhoods that are on average over \$19,000 lower in median income than white young adults as of 2013, whereas in Los Angeles, the gap for middle-aged adults is also significant but much less, about \$7,500. Although age or life-cycle may account for the difference in part, the differential black-white gap is likely driven by the structural reality of severe and enduring racial segregation in Chicago for much of its history (Massey and Denton 1993; Sampson 2012).⁷

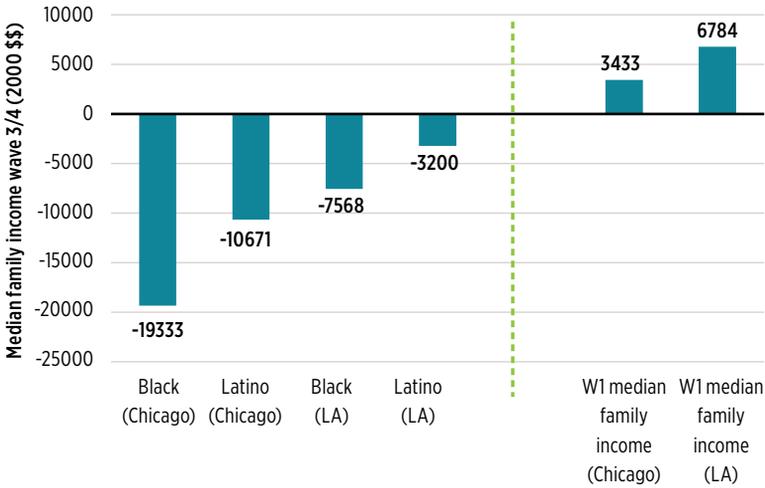
In addition, Los Angeles residents reap a greater benefit than Chicagoans on initial neighborhood position. For every \$10,000 in neighborhood income at baseline, L.A. adults get a later return of more than \$6,700, compared to \$3,433 in Chicago. The follow-up is longer in Chicago (1995–2012), but when the model is revised to examine the period 2000 to 2012, insuring an exact time frame for comparison, the estimate for Chicago is just under \$3,000, or less than half that of Los Angeles. The basic result thus holds.

Summary and Policy Implications

The results of this paper militate against the idea that neighborhood income inequality is somehow recent or that neighborhoods have radically repositioned

7 Further analysis shows that the strong black-white gap is obtained for the caretakers of the birth cohort who are similar in age to the LAFANS adults.

Figure 6. Selected coefficients predicting neighborhood median income of MIP respondents in 2012 (wave 3 Los Angeles and wave 4 Chicago). Adjusted for age, race, sex, length of residence, residential mobility (including out of Chicago/Central L.A.) and baseline family income, neighborhood income, education, HH size, homeowner, employment, and marital status



Note: The coefficients on Wave 1 Median Family Income have been re-scaled by 10,000. For the Chicago sample, baseline socio-economic covariates refer to the caregiver (e.g., marital status) or family (e.g., income), given the young age of respondents at the beginning of the panel. The Los Angeles data on middle-age adults pertain to the respondent or his or her family. Median neighborhood income at final wave is in 2000 dollars.

themselves. Just as individual income mobility has been fairly low for some time (Chetty et al. 2014b), the odds of neighborhood-level upgrading are relatively low and persistent neighborhood inequality has existed for decades. It is true that some cities have changed dramatically and that the middle class is in peril, but large-scale secular changes have been, for the most part, superimposed on preexisting structures of inequality. These structures exist nationally and in both cities studied, although the persistence of concentrated extremes is as high or higher in the newer sunbelt city of Los Angeles than in the older city of Chicago that is typically considered more divided by place.

At the individual level, the results show greater change, or contextual mobility, but persistence still dominates. Retention of neighborhood income status is considerable even during the highly mobile and unstable transition to young adulthood; in Chicago, only about a tenth of adolescents experienced downward mobility into their 30s. In Los Angeles the retention of privilege is even greater; 90 percent of adult respondents who lived in upper-income neighborhoods stayed at or near the top. At the other end of the distribution, the prevalence of those remaining in poverty is also similar and substantial in both cities despite the age difference and follow-up differential. For example, in both cities, fewer than 10 percent of individuals in the bottom neighborhood-income group climbed to the top by the end of the follow-up.

Perhaps the most troubling finding is the pronounced magnitude of racial inequality in neighborhood economic status and contextual mobility. Whites enjoy a substantial advantage, at least \$12,000 more in neighborhood income than blacks in each city at each wave, and a gap in ICE scores of over a standard deviation in Chicago and nearly a standard deviation in Los Angeles. Further analysis shows that patterns are similar for all age cohorts, suggesting that these findings are not developmental in nature. When examining change models by controlling for baseline neighborhood income status, blacks end up in destination neighborhoods with about \$19,000 lower median income than whites in Chicago and almost \$8,000 lower in Los Angeles (figure 6). In both cities, initial conditions in median income also directly predict destination median income. These findings underscore the path dependence of living in neighborhood poverty and the significant racial penalty that blacks in Chicago and Los Angeles pay.

Do changes in life circumstances materially alter the basic patterns in the data that have been presented here? Perhaps surprisingly, a direct assessment of both residential and social mobility (e.g., increases in income or education, marital changes, and employment transitions) does *not* change the fundamental inequalities shown in figures 4 and 5 for Los Angeles (Sampson et al. 2015b). Moreover, Perkins and Sampson (2015) find that racial differences in neighborhood exposure to poverty are so strong that even *high-income* blacks are exposed to greater neighborhood poverty than *low-income* whites. For example, nonpoor blacks in Chicago live in neighborhoods that are nearly 30 percent in poverty—traditionally the definition of “concentrated poverty” areas—whereas poor whites live in neighborhoods with 15 percent poverty, about the national average. A substantial minority of blacks in Chicago (about 18 percent) also experienced living in poor neighborhoods *and* living in individual poverty at the same time by the end of our study—what can be called “compounded deprivation” (Perkins and Sampson 2015)—compared to only a handful of whites (less than 1 percent). This large difference remains after controlling for anxiety/

depression, self-control, delinquency, and cognitive skills of the respondent, along with exposure to violence in the community and family criminality. It is thus clear that for blacks in particular, whether in Los Angeles or Chicago, the social realities of poverty are spatially constricted in a strong and persistent way, even when accounting for individual residential and social mobility, and, in Chicago, for the foundations of human capital development (Heckman 2006).

Affirmative Action for Neighborhoods?

The results of this paper imply that a singular focus on individual income mobility is misleading. It is not that individual mobility is unimportant, but that neighborhood mobility has its own logic and demands independent inquiry. The spatial foundations of inequality further imply that policies should aim to change where individuals live or change the neighborhoods themselves.⁸

The person-based approach to reducing spatial inequality focuses on individual residential mobility—attempting to move individuals out of poor communities and into middle-class or even rich areas. A prominent strategy is to give housing vouchers to induce residents to move away from areas of concentrated poverty, as occurred in the MTO experiment.⁹ The front-page headline in the *New York Times* reporting long-term results on the MTO study and another study on moving across neighborhoods laid bare the dominant policy takeaway: “Change of Address Offers a Pathway out of Poverty” (May 4, 2015)—the “move out” approach.

Instead of moving out, the goal of place-based interventions is to intervene holistically at the community level and renew the existing but disinvested and often troubled neighborhoods in which the poor live with an infusion of new resources. When poor individuals are asked about problems in their communities or why they want to move, the answers turn on issues like getting away from violence, drugs, gangs, and poor performing schools (Wilson and Mast 2014). Logically, this finding suggests that what poor residents want in their neighborhoods is what everyone wants, and that living among the poor is seen as a problem by residents only insofar as it means the denial of valued resources, like safety and quality education.¹⁰ In theory at least, people can stay in place at the community level but still “move up” or realize improved lives and access to resources through place-based intervention.

8 The ideas in this section were introduced in the essay, “Move Up or Out? Confronting Compounded Deprivation,” The Dream Revisited Blog, New York University, Furman Center.

9 Another variant is to tear down poor communities and disperse residents, as occurred in the Robert Taylor Homes or Cabrini Green projects in Chicago.

10 For a similar argument about racial segregation, see Pattillo (2014).

Person-based versus place-based interventions have been the subject of much debate that goes well beyond the scope of this paper, but a concise summary is that there is no “magic bullet” intervention at either level (e.g., Ellen and Turner 1997; Galster 2011; Sharkey 2014). Voucher programs like MTO have shown some positive effects, but the evidence is still uncertain overall. It is also not clear that scaling up voucher programs to the national level is feasible—can the nation afford to move tens of millions of residents? And what if concentrated poverty is shifted to other locations when mobility programs are scaled up (Sampson 2012, 380–82)? Meanwhile, community-level interventions have produced uneven evaluation results and, while neighborhood income-mixing has surfaced as a favored policy tool, research is sparse and has produced conflicting results (Joseph and Chaskin 2012).

Although both person- and place-based interventions have a mixed record of success, the data on persistent inequality points to the need for creative thinking on sustained interventions. In particular, it is surprising how few neighborhood policies take the long view; most interventions are single-site or time-constrained with outcomes measured locally and in the short run. As Sharkey (2013, 179; 2014) has argued, there is a need for durable investments in disadvantaged urban neighborhoods to match the persistent and longstanding nature of institutional disinvestment that such neighborhoods have endured over many years. Several strategies exist to improve communities that are logical candidates for retooling with an emphasis on sustained investment. Candidates include

- violence reduction integrated with community policing and prisoner reentry programs that foster the legitimacy of criminal justice institutions;
- integrated community-based social services that recognize the multidimensional nature of poverty;
- code enforcement and crackdown on landlord disrepair and illegal eviction practices;
- enhanced protections against housing discrimination; and
- educational reform and support for healthy child development in high-risk, poor communities.

Federal interventions in many cities, such as Choice Neighborhoods and Promise Neighborhoods, are to date relatively small-scale and unevaluated, but they too may prove useful in informing the next generation of place-based interventions. Hybrid interventions that seek to create a more

equitable mix of incomes, such as the HOPE VI mixed-income intervention, also make logical sense.¹¹

A policy option that combines a person- and place-based approach is to give cash assistance or reduce the tax rate for those in compounded deprivation (Perkins and Sampson 2015)—that is, poor residents who also live in poor or historically disinvested areas. Cash assistance or tax relief (e.g., along the lines of a negative income tax) could also be combined with job training or public works job creation. The logic behind this idea is that poor individuals who have lived for an extended period in poor neighborhoods have accumulated a set of disadvantages very different than poor individuals who have otherwise been surrounded by the resources of better-off neighborhoods (see also Wilson 1987).

Racial inequality cannot be set aside in this discussion. African Americans, more than whites or Latinos, have historically borne the brunt of differential exposure to compounded deprivation, and the data presented in this paper show that this continues to the present day. These challenges could be addressed, and communities potentially preserved, even with a policy targeted at all qualified persons regardless of race. The ecological impact would disproportionately benefit minorities, and, unlike MTO-like voucher programs, such a policy would allow poor residents to remain in place, if desired, while at the same time increasing their available income. Extra income would, in effect, lower the neighborhood poverty rate and, in theory, lead to longer-run social investments in the community among stayers. Length-of-residence requirements could be imposed to counteract attempts to exploit the system by in-movers, and incentives to move could remain an alternative for residents wishing to leave.

Regardless of the specific initiative, there are encouraging trends that give hope to the idea that revitalizing disadvantaged communities through place-based interventions and person-based income, tax, or job policies is not naïve. For one thing, contrary to stereotypes, disadvantaged communities have latent collective efficacy (e.g., organizational capacities; reservoirs of informal social control) that are otherwise suppressed by the cumulative disadvantages built up after repeated everyday challenges (Sampson 2012, 394–413). The further good news is that some of the challenges that have accrued to disadvantaged communities have abated. Violence is down dramatically in most cities, people are moving back to cities, racial segregation is moderating, and immigration has revitalized many neighborhoods across the country (Sampson 2015). Taken together, these facts suggest real prospects for the increased integration of neighborhoods across race and class boundaries in urban areas that not too long ago were written off or were thought to be dying (Ellen 2000). These trends also raise the possibility that, with sustained policy

11 For a description of these and other mixed-income and neighborhood-level interventions, see Chaskin and Joseph (2015).

interventions, the black-white gap in community resources that has dominated the urban scene for so long may decline.

In conclusion, the ultimate consensus goal is to break the longstanding link in American society between neighborhood of residence and the deprivation of essential resources. There is nothing intrinsic about policy to prevent intervening at the scale of the community to accomplish this goal while attending to the realities of individual choice. Voucher policies remain important and should be improved, but the persistence of neighborhood inequality demands that we simultaneously invest in sustained place-based interventions that give poor individuals a chance, if desired, to “move up” in place. How best to combine person- and place-based interventions is therefore a key policy challenge for the future. ■

References

- Burdick-Will, Julia Anne, Jens Ludwig, Stephen W. Raudenbush, Robert J. Sampson, Lisa Sanbonmatsu, and Patrick T. Sharkey. 2011. "Converging Evidence for Neighborhood Effects on Children's Test Scores: An Experimental, Quasi-Experimental, and Observational Comparison." In *Social Inequality and Educational Disadvantage: New Evidence on How Families, Neighborhoods and Labor Markets Affect Educational Opportunities for American Children*, edited by Greg Duncan and Richard Murnane, 255–76. New York: Russell Sage Foundation.
- Chaskin, Robert J., and Mark L. Joseph. 2015. *Integrating the Inner City: The Promise and Perils of Mixed-Income Public Housing Transformation*. Chicago: University of Chicago Press.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez. 2014a. "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." *The Quarterly Journal of Economics* 129:1553–623.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, Emmanuel Saez, and Nicholas Turner. 2014b. "Is the United States Still a Land of Opportunity? Recent Trends in Intergenerational Mobility." *American Economic Review Papers and Proceedings* 104:141–47.
- Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. 2015. "The Long-Term Effects of Exposure to Better Neighborhoods: New Evidence from the Moving to Opportunity Experiment." Cambridge, MA: Harvard University, Equality of Opportunity Project Working Paper.
- Ellen, Ingrid Gould, and Margery Austin Turner. 1997. "Does Neighborhood Matter? Assessing the Recent Evidence." *Housing Policy Debate* 8:833–66.
- Ellen, Ingrid Gould. 2000. *Sharing America's Neighborhoods: The Prospects for Stable Racial Integration*. Cambridge, MA: Harvard University Press.
- Galster, George, Dave E. Marcotte, Marv Mandell, Hal Wolman, and Nancy Augustine. 2007. "The Influence of Neighborhood Poverty During Childhood on Fertility, Education, and Earnings Outcomes." *Housing Studies* 22:723–51.
- Galster, George. 2011. "The Mechanism(s) of Neighbourhood Effects: Theory, Evidence, and Policy Implications." In *Neighbourhood Effects Research: New Perspectives*, edited by M. van Ham, D. Manley, N. Bailey, L. Simpson, and D. Maclennan, 23–56. Dordrecht, Netherlands: Springer.
- Heckman, James J. 2006. "Skill Formation and the Economics of Investing in Disadvantaged Children." *Science* 312:1900–02.
- Hout, Michael. 2015. "A Summary of What We Know About Social Mobility." *The ANNALS of the American Academy of Political and Social Science* 657:27–36.
- Joseph, Mark L., and Robert J. Chaskin. 2012. "Mixed-Income Developments and Low Rates of Return: Insights from Relocated Public Housing Residents in Chicago." *Housing Policy Debate* 22:377–405.
- Leventhal, Tama, and Jeanne Brooks-Gunn. 2000. "The Neighborhoods They Live In: The Effects of Neighborhood Residence on Child and Adolescent Outcomes." *Psychological Bulletin* 126:309–37.

- Ludwig, Jens, Greg J. Duncan, Lisa A. Gennetian, Lawrence F. Katz, Ronald C. Kessler, Jeffrey R. Kling, and Lisa Sanbonmatsu. 2012. "Neighborhood Effects on the Long-Term Well-Being of Low-Income Adults." *Science* 337:1505–10.
- Massey, Douglas S., and Nancy Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.
- Mayer, Susan E., and Christopher Jencks. 1989. "Growing up in Poor Neighborhoods: How Much Does It Matter?" *Science* 243:1441–45.
- Mumford, Lewis. 1954. "The Neighborhood and the Neighborhood Unit." *Town Planning Review* 24:256–70.
- Pattillo, Mary. 2014. "The Problem of Integration." New York: The Dream Revisited Blog, New York University, Furman Center. <http://furmancenter.org/research/iri/pattillo>.
- Perkins, Kristin L., and Robert J. Sampson. 2015. "Compounded Deprivation in the Transition to Adulthood: The Intersection of Racial and Economic Inequality among Chicagoans, 1995–2013." *RSF: The Russell Sage Foundation Journal of the Social Sciences*. Special Volume on "Severe Deprivation in America," 1:35–54.
- Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Cambridge, MA: Harvard University Press.
- Sampson, Robert J. 2008. "Moving to Inequality: Neighborhood Effects and Experiments Meet Social Structure." *American Journal of Sociology* 114:189–231.
- Sampson, Robert J., Patrick Sharkey, and Stephen W. Raudenbush. 2008. "Durable Effects of Concentrated Disadvantage on Verbal Ability among African-American Children." *Proceedings of the National Academy of Sciences* 105:845–52.
- Sampson, Robert J. 2012. *Great American City: Chicago and the Enduring Neighborhood Effect*. Chicago: University of Chicago Press.
- . 2015. "Immigration and America's Urban Revival." *American Prospect* (Summer): 20–24.
- Sampson, Robert J., Robert D. Mare, and Kristin L. Perkins. 2015a. "Achieving the Middle Ground in an Age of Concentrated Extremes: Mixed Middle-Income Neighborhoods and Emerging Adulthood." *The ANNALS of the American Academy of Political and Social Science* 660:156–74.
- Sampson, Robert J., Jared Schachner, and Robert D. Mare. 2015b. "Urban Income Inequality and the Great Recession in Sunbelt Form: Disentangling Individual and Neighborhood-Level Change in Los Angeles." Paper presented at the Russell Sage Foundation Conference on "The Spatial Foundations of Inequality," February 12, 2015, New York City.
- Sanbonmatsu, Lisa, Jens Ludwig, Lawrence F. Katz, Lisa A. Gennetian, Greg J. Duncan, Ronald C. Kessler, Emma Adam, Thomas W. McDade, and Stacy Tessler Lindau. 2011. "Moving to Opportunity for Fair Housing Demonstration Program—Final Impacts Evaluation." Washington, D.C.: U.S. Department of Housing and Urban Development.
- Sharkey, Patrick. 2010. "The Acute Effect of Local Homicides on Children's Cognitive Performance." *Proceedings of the National Academy of Sciences* 107:11733–38.

- Sharkey, Patrick, and Felix Elwert. 2011. "The Legacy of Disadvantage: Multigenerational Neighborhood Effects on Cognitive Ability." *American Journal of Sociology* 116:1934–81.
- Sharkey, Patrick. 2013. *Stuck in Place: Urban Neighborhoods and the End of Progress toward Racial Equality*. Chicago: University of Chicago Press.
- . 2014. "Neighborhoods, Cities, and Economic Mobility." Boston, MA: Paper presented at the Federal Reserve Conference.
- Sharkey, Patrick, and Jacob Faber. 2014. "Where, When, Why and for Whom Do Residential Contexts Matter? Moving Away from the Dichotomous Understanding of Neighborhood Effects." *Annual Review of Sociology* 40:559–79.
- Smith, Michael E. 2010. "The Archaeological Study of Neighborhoods and Districts in Ancient Cities." *Journal of Anthropological Archaeology* 29:137–54.
- Smith, Michael E., Ashley Engquist, Cinthia Carvajal, Katrina Johnston-Zimmerman, Monica Algara, Bridgette Gilliland, Yui Kuznetsov, and Amanda Young. 2014. "Neighborhood Formation in Semi-Urban Settlements." *Journal of Urbanism* 8:173–98.
- Wilson, Ronald E., and Brent D. Mast. 2014. "Housing Choice Vouchers and Escaping Neighborhood Crime." In *Encyclopedia of Criminology and Criminal Justice*, edited by Gerben Bruinsma and David Weisburd, 2363–71. New York: Springer.
- Wilson, William Julius. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: Chicago University Press.
- Wodtke, Geoffrey T., David J. Harding, and Felix Elwert. 2011. "Neighborhood Effects in Temporal Perspective: The Impact of Long-Term Exposure to Concentrated Disadvantage on High School Graduation." *American Sociological Review* 76:713–36.
- Wodtke, Geoffrey T. 2013. "Duration and Timing of Exposure to Neighborhood Poverty and the Risk of Adolescent Parenthood." *Demography* 50:1765–88.