Linking Individual and Community Economic Mobility:

The Spatial Foundations of Persistent Inequality in the United States

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Considerable academic and public attention has been drawn to the pulling away of the very rich—the so-called "one percent" whose gains have far outpaced those of everyone else (Piketty 2014). But the debate has reached well beyond the very top, especially in the United States. Indeed, the hollowing out of the middle class, continuing stagnation of wages, and new 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 are less than 10 percent for the nation (Chetty et al. 2014b). Meager odds of upward mobility challenge the implicit "social inequality contract" that, for better or worse, has long held in American society.

The facts on individual income mobility are crucial, of course, but they tell only half the story. The other half pertains to the prospects of change in one's community of residence: *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 bear on life chances across a variety of outcomes.¹ More generally, the persistent fact of neighborhood differentiation across the sweep of urban history (Smith 2010; Smith et al. 2014) suggests that spatial arrangements constitute a fundamental organizing dimension of social inequality (Massey 1996; Sampson 2012; Sharkey 2013).

¹ Although beyond the scope of this paper, comprehensive reviews of the literature have identified credible evidence of the deleterious causal 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 2014; Sharkey and Faber 2014). There is also experimental evidence pointing to long-term neighborhood effects on adult income attainment. A recent study of Moving to Opportunity (MTO) finds that voucher-induced moves to a lower-poverty neighborhood in 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.

It follows that we need to pay equal attention to questions of mobility in community contexts. In particular, examining individual transitions in and out of neighborhood poverty and the distribution of neighborhood income status over time is fundamental to understanding income inequality and the impact of neighborhood contexts on individual outcomes. Yet we know surprisingly little 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. Whether the focus is on the extremes of the income distribution or the loss of middle class and mixed-income neighborhoods, changes in the spatial and socioeconomic distribution of populations in urban areas reflect a complex mixture of changes in the income distributions of individuals, patterns of socioeconomic mobility, the residential choices of individuals, and the rise and fall of neighborhoods themselves (Sampson, Schachner and Mare 2015). These components of change reflect both long-run trends, such as the drift to higher levels of income inequality in the U.S.; large-scale immigration and gentrification over the past few decades; and shorter-term shocks, such as the financial crisis associated with the Great Recession. The data requirements to study these components of change are strict and thus have stymied knowledge.

I address these challenges by reporting results from a long-term project that combines the study of neighborhood change across the U.S. with an original longitudinal study of individuals in two American cities that are very different in urban form and history: Chicago and Los Angeles. I focus on two basic questions: (1) *how mobile are neighborhoods*, and (2) *how mobile are individuals across neighborhood income types*? At the neighborhood level, I examine stability and change in economic status across two decades for all urban neighborhoods in the United States. For example, how much mobility is there in the economic status of

neighborhoods, especially in an era of increasing inequality and the Great Recession? I then drill down to report neighborhood-level changes specific to Chicago and Los Angeles.

At the individual or contextual level, I examine trajectories of individuals across neighborhood income status and how they vary by race, residential mobility, socio-economic factors, individual characteristics, life-cycle change, and the shock of the Great Recession. A fundamental question is directly analogous to individual mobility studies: 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. Here the idea is that even if neighborhood poverty is durable overall, individuals, including the poor, can always move to a better neighborhood—what we can think of as upward *contextual* mobility (Sharkey 2013: 16). In this view of neighborhood selection, individual characteristics govern escape from neighborhood poverty (Jencks and Mayer 1990)? I address these questions and competing claims with new data on the course of neighborhood economic attainment among individuals, drawing on two coordinated longitudinal studies-again in the cities of Los Angeles and Chicago. In the concluding section I synthesize the main results and probe 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).

Data

The current study is based on the "Mixed-Income Project" (MIP), a longitudinal and probabilitybased design that followed individuals and tracked their residential histories in Los Angeles and Chicago. 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, especially for children and adolescents in the PHDCN and adults in LAFANS. The MIP was designed to study individual and neighborhood dynamics, permitting comparison of a newer Southwest city fundamentally different in urban form and composition than the older "Rust Belt" context exemplified by Chicago. Details on the sampling design are found in related papers (Sampson, Mare and Perkins 2015; Sampson, Schachner and Mare 2015).

I examine and compare two measures of neighborhood income status. The first is *median family income* at the census tract level (in 2000 dollars), a summary indicator of neighborhood quality with the added benefit of a clear metric—the dollar. I assign each tract in the United States and within Los Angeles County and Chicago's Cook County 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, ACS 2005-2009 and ACS 2008-2012.² This approach enables me to track neighborhood trajectories relative to each other and relative to the national distribution simultaneously.

My second measure taps the degree of mutual exposure of lower- and higher-income persons within a census tract. I define 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

² Median family income quintile cutoff points are based on national MSA (metropolitan statistical area) 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.

are affluent). Greater income mixing, in the form of a more even balance of the poor and affluent, typically in middle class areas, is centered at zero (Sampson, Mare and Perkins 2015).

At the individual level in L.A., I describe mobility tables for changes in median family income and ICE quintiles of respondents' neighborhoods between Census 2000 and ACS 2008-2012, aligned with LAFANS wave 1 in 2000 and the MIP survey in 2012. For Chicago, census measures from 1990 and 2000 were interpolated to the year of interview for waves 1-2 (1995 and 1997), and the ACS 2008-2012 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, Mare and Perkins 2015). The study design permits me to compare two phases of the life course at the individual level: the transition to young adulthood and the period of middle adulthood. Specifically, I examine 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 transition here is thus from the social origins of the parental or home neighborhood when growing up to the neighborhood in which the child resides as an adult (Hout 2015). In L.A., I focus on middle adulthood, looking at neighborhood income trajectories of adults (with and without children) from LAFANS wave 1 interview that were confirmed to reside within L.A. County at follow-up (85% of sample). The analytic file of 635 randomly selected adult Los Angelinos were about 40 at baseline. In both samples, the data are weighted to reflect the sampling design and potential attrition bias.

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 questions of this paper. First, by focusing on neighborhood-level transitions both nationally and in Chicago and L.A., we gain necessary information on the large-scale structural changes that

shape individual lives and choices. Second, 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. Third, 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 (N = 670)—and in Los Angeles, the data span a dozen years across middle adulthood (N = 635). Period effects can thus be examined for different developmental phases of the life course. In Chicago, there are also direct measures of differences in individual character and ability (e.g., self-control, IQ, temperament) that are the basis of the "non-cognitive skills" thesis about who gets ahead (Heckman and Mosso 2014; Heckman 2006). A fourth feature is the timing of data collection; in both sites, the research design permits examination of pre- and post-Great Recession measures of income at both the individual and neighborhood levels. Finally, both sampling designs capture the racial and ethnic diversity of the United States and how cities have changed in recent decades.

Summary of Results

The results that I will present (see also tables) yield ten interrelated conclusions that highlight the strong spatial foundations of income inequality and that call for a broader framework than the individual-level focus of most economic mobility research. The results also call into question analytic or policy frameworks that do not directly confront the legacies of racial inequality.

1. At the neighborhood level, income status is surprisingly persistent over time for both poverty and affluence despite numerous changes in society such as increases in income inequality, immigration, gentrification, and the great crime decline. Whether for all U.S.

urban areas or in Chicago and Los Angeles, we see relatively little upward or downward mobility across the last two decades (Tables 1-3; Figure 1). Despite widespread claims of gentrification, for example, less than 3 percent of U.S. neighborhoods in the bottom two categories of income moved above the 60th percentile in income in the 1990s or 2000s. Almost no neighborhoods rose from the bottom fifth to the top fifth. This strong inertia is consistent with the persistence of neighborhood "poverty traps" (Sampson and Morenoff 2006). But cycles of "wealth maintenance" are equally present—significant downward mobility of neighborhoods is extremely rare, even in the Great Recession.

- 2. By contrast, there is fluidity in the middle of the income distribution in Chicago and Los Angeles, especially compared to the U.S. Mixed middle-income neighborhoods are tenuous, showing fragility and hollowing out in the 1990s in L.A. and in the 2000s in Chicago. The basic picture, then, is one of rigidity at the extremes and vulnerability or precariousness in the middle when neighborhoods are the units of analysis.
- 3. Overall, these findings militate against the idea that income inequality is somehow recent at the neighborhood level or that neighborhoods have radically repositioned 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 cities have changed dramatically and the middle 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 unexpectedly, the persistence of concentrated extremes is as high or higher in the newer Sunbelt city of L.A. than in the older city of Chicago that is typically considered more segregated or divided by place.

- 4. At the individual level (Table 4), 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 L.A. the retention of privilege is even greater: 90 percent of middle-adulthood respondents who lived in upper-income neighborhoods stayed at or near the top.
- 5. At the other end of the distribution, the prevalence of remaining stuck 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.
- 6. In both cities and similar to the neighborhood-level findings, however, fluidity in the middle of the income distribution is relatively common.
- Perhaps the most bracing finding is the pronounced magnitude of racial inequality in neighborhood economic status and contextual mobility (Figures 2-6). 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 almost \$19,000 lower median income than whites in Chicago and about \$8,000 lower in Los Angeles (Figure 6). In both cities, initial conditions in median income 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 L.A. pay.

- 8. In Chicago, black adolescents were also the hardest hit in the Great Recession era. The decline in neighborhood income for blacks compared to whites in the decade of the 2000s was nearly \$5,000 (Figure 2). By contrast, whites saw no decline in neighborhood income and an increase in concentrated affluence from waves 3 to 4 (Figure 3). Latinos also experienced an increase in concentrated affluence compared to blacks, and while their median neighborhood income did decline in the 2000s, the dip was not significant.
- 9. Importantly, the large white-black gap in both cities cannot be explained away in terms of background characteristics such as income, education, homeownership, or employment, *or* by social or residential mobility. In Chicago, the black-white gap also does not materially decline after accounting for both non-cognitive and cognitive skills (further results to be presented). Given the strict set of controls for what are typically asserted as major sources of human capital skill formation, a selection bias interpretation is implausible in light of the magnitude of the black-white gap.
- **10.** Racial inequality in exposure to low-income neighborhood environments is so strong that high-income blacks are exposed to greater neighborhood poverty than low-income whites. Blacks are also exposed to greater unemployment, numbers of single-parent families, and social organizational deprivation in the form of crime, disorder, and low collective efficacy. Furthermore, almost a fifth of blacks in Chicago experience living in poor neighborhoods *and* living in individual poverty at the same time by the end of our study compared to only a handful of whites (Perkins and Sampson 2014). Deprivation is thus multidimensional and compounded in character, with sharp divisions by race.

Policy Implications: Affirmative Action for Neighborhoods?

Synthesizing to a more general level, these conclusions imply that the dominant focus on individual income mobility misses an important part of how Americans experience poverty and affluence. It is not that individual mobility is unimportant, but that contextual mobility has its own logic and demands independent inquiry. The strong spatial foundations of income inequality further imply that policies should aim to change the neighborhood context of individuals or change places themselves. One way to think about policy responses to spatial inequality is therefore to separate them by target of analysis-individual or community. The first approach to reducing spatial inequality begins with the premise of promoting personal choice, highlighted symbolically and concretely in the voucher movement, which advocates vouchers as a way to move individuals away from poor performing schools or poor communities. An example of an individual policy is to give housing vouchers to induce residents to move away from concentrated poverty areas, such as occurred in the Moving to Opportunity experiment (Ludwig et al. 2012). The second approach is to intervene holistically at the scale of neighborhoods or places themselves. Rather than simply move people out of targeted lowincome communities, the idea is to renew what is already there with an infusion of resources.

Person-based versus *place-based* interventions have in fact been the subject of much debate that goes well beyond the scope of this paper. A fair summary is that there is no "magic bullet" intervention at either level. Voucher programs have shown some positive effects, but the evidence is mixed, and residents of poor areas have locally-based social ties that are potentially disrupted by moves. It is also not clear that "scaling up" voucher programs to the national level is feasible, and there are worries that concentrated poverty would simply be shifted to other locations. What poor residents seem to want most is not to move but simply to have their

communities revitalized. The latter is not simple, of course, and there is a long history to failed community-level or place-based interventions. And while neighborhood income mixing has surfaced as a favored policy tool and is the subject of growing scholarly discussion, research evaluating its sources and consequences is sparse and has produced conflicting results.

Nonetheless, the data I have presented on the persistent inequality underlying contextual economic mobility points to the need for sustained interventions at the neighborhood level. It is surprising how few interventions are taken with the long view in mind. As Sharkey (2013: 179) has argued, most interventions are single-site and time-constrained such that outcomes are measured locally and in the short run. But the evidence implies we need 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 to improve communities currently exist and are logical candidates for retooling with an emphasis on sustained investment. Although evaluations are not uniformly available, placebased candidates in the U.S. include the construction of new affordable housing and renewal of older housing in poor neighborhoods; 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; modification of restricted zoning rules to permit low-income housing; code enforcement and crackdown on landlord disrepair and illegal eviction practices; enhanced protections against housing discrimination; and early educational and other supports for healthy child development in high-risk, poor communities. Hybrid interventions that seek to create a more equitable mix of incomes, such as the HOPE VI mixed-income intervention, also make logical sense.

What is needed are not just local policies targeted at specific communities but a federally based or large-scale set of interventions, sustained over time and targeted to many, and ideally all, disadvantaged communities. A long-term focus is also consistent with the emerging body of research that demonstrates the critical importance of early childhood development for later wellbeing and economic mobility. There is a mounting body of evidence which suggests that prolonged exposure to concentrated disadvantage and violence undermines early child development and human capital skills (Heckman and Mosso 2014; Heckman 2006). National interventions now being promoted by the U.S. federal government in selected cities, such as Choice Neighborhoods and Promise Neighborhoods, informed by localized efforts such as the Harlem Children's Zone, thus provide grounds for optimism for a new generation of contextual, place-based policies.

A factor that looms large in the present analysis and that cannot be set aside in these conversations is racial inequality. It is a not a topic that is sits comfortably nowadays in policy circles, but the race penalty in my data beg the question. Do we need affirmative action for neighborhoods? I would conclude yes, and that we can do so in creative ways that link individual and spatial logics. In addition to placed-based programs that target formerly disinvested and hence disproportionately minority neighborhoods, one policy option is to give cash assistance or reduce the tax rate for those in compounded deprivation—that is, *poor residents who also live in poor or historically disinvested areas*. Cash assistance or tax relief could also be combined with jobs training or public works job creation (Wilson 2013).

The logic behind this idea is that poor individuals living in poor neighborhoods face a very different social world than poor residents who are otherwise surrounded by resource-rich neighborhoods, and that blacks, more than whites or Latinos, have historically borne the brunt of

differential exposure to concentrated poverty (Wilson 1987). Unfortunately, as I have shown, they continue to do so to this day. These facts could be addressed and communities potentially preserved even with a policy implemented for all qualified persons regardless of their 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. (Incentives to move could remain an alternative for residents wishing to leave).³

There are encouraging trends that give further hope to the idea of revitalizing disadvantaged communities, whether through place-based interventions or individual policies. For one thing, there is evidence that, contrary to stereotypes, disadvantaged communities have latent collective efficacy (Sampson, Raudenbush and Earls 1997) and capacities that are otherwise suppressed by the cumulative disadvantages built up after repeated everyday challenges. The further good news is that many of these challenges have turned in the right direction. Violence is down dramatically, people are moving back into cities, racial segregation is down, and immigration is changing the nature of many neighborhoods. Taken together, these facts suggest real prospects for the increased sharing of neighborhoods across race and class boundaries in urban areas that not too long ago were written off or were thought to be dying

³ Another advantage of cash assistance or a "negative income tax" (NIT) policy targeted to compounded deprivation is that large new bureaucracies are not required. Of course, versions of these programs have been criticized, inter alia, for decreasing incentives to work. But such limitations are not necessarily any worse than current policies, and a jobs creation program could be included to address concentrated unemployment (see e.g., the discussion of "The Local Job for America Act" in Wilson, 2013:16). And although blacks would benefit disproportionately, such a program would also aid Latinos and whites who live in compounded deprivation. At the very least, place-linked variants of the earned income tax credit or a revised version of the negative income tax deserve consideration for their potential costs and benefits.

(Ellen 2000). These trends also raise the possibility that with sustained policy interventions, the "black-white" gap in contextual disadvantage that has dominated American cities may decline.

Finally, as I have concluded elsewhere (Sampson 2012: 426), existing continuities and social inequalities are not inherent but are socially reproduced in multiple ways that can be acted upon. We act on individual incentives constantly, and macro national policies are woven into the identity of the country. There is thus nothing intrinsic about policy to prevent intervening at the scale of the community while attending to the realities of individual choice. Rather than privileging the "move out" approach, it may well be that the time has come for policies designed to allow poor individuals to remain in place but with new resources.

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TABLE 1

Α.	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	1.747	5,700	2.344	343	21	10.155		
		17.37	56.39	23.14	3.39	0.21	20.09		
	3	181	2,237	5,315	2,270	151	10,154		
		1.80	22.13	52.48	22.41	1.49	20.09		
	4	50	252	2,099	5,908	1,774	10,083		
		0.50	2.49	20.72	58.33	17.53	19.95		
	5	18	63	177	1.582	8,172	10.012		
	U	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		

Neighborhood-Level Mobility in Median Family Income, 1990 to 2000 and 2000 to 2008-2012: United States, excluding Puerto Rico

В.	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	1,943	5,287	2,584	338	12	10,164	
		19.12	52.02	25.42	3.33	0.12	20.02	
	3	311	2,303	4,992	2,395	159	10,160	
		3.06	22.67	49.13	23.57	1.56	20.01	
	4	79	342	2,116	5,779	1,851	10,167	
		0.78	3.36	20.81	56.84	18.20	20.03	
	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	

<u>Notes</u>: 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 2008-2012 (N = 50,959) are included.

А.	1990 ICE Quintiles							
		1	2	3	4	5	Total	
2000 ICE	1	0 1 2 4	1 001	164	20	2	10 142	
Quintiles	1	8,134 80.81	1,821	104	0.20	0.03	20.07	
		00.01	10.00	1.02	0.20	0.05	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 2 1 9	5 347	2 270	146	10 140	
	5	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	
	C	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	
		2000 ICE Avintilas						
В.			2000	ICE Ou	intiles			
В.		1	2000	ICE Qu 3	intiles 4	5	Total	
B. 2008-12 ICE		1	2000 2) ICE Qu 3	intiles 4	5	Total	
B. 2008-12 ICE Quintiles	1	7,799	2000 2 2,091	232	intiles 4 17	5	Total 10,142	
B. 2008-12 ICE Quintiles	1	1 7,799 77.13	2000 2 2,091 20.58	ICE Qu 3 232 2.28	intiles 4 17 0.17	5 3 0.03	Total 10,142 19.98	
B. 2008-12 ICE Quintiles	1	1 7,799 77.13 1 908	2000 2 2,091 20.58 5 411	ICE Qu 3 232 2.28 2.515	intiles 4 17 0.17 317	5 3 0.03 9	Total 10,142 19.98 10,160	
B. 2008-12 ICE Quintiles	1 2	1 7,799 77.13 1,908 18.87	2000 2 2,091 20.58 5,411 53.27	ICE Qu 3 232 2.28 2,515 24.75	intiles 4 17 0.17 317 3.12	5 3 0.03 9 0.09	Total 10,142 19.98 10,160 20.01	
B. 2008-12 ICE Quintiles	1	1 7,799 77.13 1,908 18.87	2000 2 2,091 20.58 5,411 53.27	ICE Qu 3 232 2.28 2,515 24.75	intiles 4 17 0.17 317 3.12	5 3 0.03 9 0.09	Total 10,142 19.98 10,160 20.01	
B. 2008-12 ICE Quintiles	1 2 3	1 7,799 77.13 1,908 18.87 292	2000 2 2,091 20.58 5,411 53.27 2,292	ICE Qu 3 232 2.28 2,515 24.75 5,096	intiles 4 17 0.17 317 3.12 2,355 22.12	5 3 0.03 9 0.09 125	Total 10,142 19.98 10,160 20.01 10,160	
B. 2008-12 ICE Quintiles	1 2 3	1 7,799 77.13 1,908 18.87 292 2.89	2000 2 2,091 20.58 5,411 53.27 2,292 22.56	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14	intiles 4 17 0.17 317 3.12 2,355 23.18	5 3 0.03 9 0.09 125 1.23	Total 10,142 19.98 10,160 20.01 10,160 20.01	
B. 2008-12 ICE Quintiles	1 2 3 4	1 7,799 77.13 1,908 18.87 292 2.89 91	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2.132	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788	5 3 0.03 9 0.09 125 1.23 1.845	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159	
B. 2008-12 ICE Quintiles	1 2 3 4	1 7,799 77.13 1,908 18.87 292 2.89 91 0.90	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303 2.98	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2,132 20.98	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788 56.97	5 3 0.03 9 0.09 125 1.23 1,845 18.14	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159 20.01	
B. 2008-12 ICE Quintiles	1 2 3 4	1 7,799 77.13 1,908 18.87 292 2.89 91 0.90	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303 2.98	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2,132 20.98	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788 56.97 1,502	5 3 0.03 9 0.09 125 1.23 1,845 18.14	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159 20.01	
B. 2008-12 ICE Quintiles	1 2 3 4 5	1 7,799 77.13 1,908 18.87 292 2.89 91 0.90 21	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303 2.98 61 0.60	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2,132 20.98 188	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788 56.97 1,683 16.56	5 3 0.03 9 0.09 125 1.23 1,845 18.14 8,189 80 51	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159 20.01 10,142 10,08	
B. 2008-12 ICE Quintiles	1 2 3 4 5	1 7,799 77.13 1,908 18.87 292 2.89 91 0.90 21 0.21	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303 2.98 61 0.60	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2,132 20.98 188 1.85	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788 56.97 1,683 16.56	5 3 0.03 9 0.09 125 1.23 1,845 18.14 8,189 80.51	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159 20.01 10,159 20.01 10,142 19.98	
B. 2008-12 ICE Quintiles Tota	1 2 3 4 5	1 7,799 77.13 1,908 18.87 292 2.89 91 0.90 21 0.21 10,111	2000 2 2,091 20.58 5,411 53.27 2,292 22.56 303 2.98 61 0.60 10,158	ICE Qu 3 232 2.28 2,515 24.75 5,096 50.14 2,132 20.98 188 1.85 10,163	intiles 4 17 0.17 317 3.12 2,355 23.18 5,788 56.97 1,683 16.56 10,160	5 3 0.03 9 0.09 125 1.23 1,845 18.14 8,189 80.51 10,171	Total 10,142 19.98 10,160 20.01 10,160 20.01 10,159 20.01 10,159 20.01 10,142 19.98	

Neighborhood-Level Mobility in ICE (Index of Concentrated Extremes), 1990 to 2000 and 2000 to 2008-2012: United States, excluding Puerto Rico

TABLE 2

<u>Notes:</u> 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 2008-2012 (N = 50,959) are included.

А.	Chicago 2000 ICE Quintiles								
		1	2	3	4	5	Total		
2008-12 ICE									
Quintiles	1	237	73	10	1	0	321		
		74.06	34.76	4.22	0.41	0.00	24.92		
	2	57	89	96	22	0	264		
		17.81	42.38	40.51	8.94	0.00	20.50		
	3	15	31	88	69	4	207		
		4.69	14.76	37.13	28.05	1.45	16.07		
	4	9	10	29	121	60	229		
		2.81	4.76	12.24	49.19	21.82	17.78		
	5	2	7	14	33	211	267		
		0.62	3.33	5.91	13.41	76.73	20.73		
Tatal		220	210	727	246	275	1 200		
TOTAL		320 100	100	100	240 100	100	1,200		

TABLE 3Neighborhood-Level Transitions Mobility in ICE, 2000 to 2008-2012:Chicago Cook County (N=1,298) and Los Angeles County (N=2,023)

В.	Los Angeles 2000 ICE Quintiles							
		1	2	3	4	5	Total	
2008-12 ICE								
Quintiles	1	463	26	1	0	0	490	
		72.34	6.95	0.32	0.00	0.00	24.22	
	2	160	217	40	2	0	419	
		25.00	58.02	12.62	0.66	0.00	20.71	
	3	13	114	146	39	2	314	
		2.03	30.48	46.06	12.96	0.51	15.52	
	4	3	16	119	187	47	372	
		0.47	4.28	37.54	62.13	12.02	18.39	
	5	1	1	11	73	342	428	
		0.16	0.27	3.47	24.25	87.47	21.16	
Total		640	374	317	301	301	2 023	
Total		100	100	100	100	100	2,023	

<u>Notes:</u> cell entries are the number of cases and column percent, respectively; only tracts with family populations above 50 in 2000 and 2008-2012 are included.

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

TABLE 4Individual-Level Transitions in Exposure to Income Extremes (ICE),
Chicago (1995-2013) and Los Angeles Samples (2000 to 2013)

Notes: cell entries are the number of cases and column percent, respectively. 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



ICE 2000

FIGURE 2.

Chicago Median Income Trajectories of Young Adulthood 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% CI)



FIGURE 3.

Chicago ICE Trajectories of Young Adulthood 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% CI)



FIGURE 4.

Los Angeles Median Income Trajectories of Middle Adulthood 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% CI)



FIGURE 5.

Los Angeles ICE Trajectories of Middle Adulthood 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% CI)



FIGURE 6.

Selected Coefficients Predicting Neighborhood Median Income of Respondents at Wave 3 (Los Angeles) or Wave 4 (Chicago). Adjusted for Age, Race, Sex, Length of Residence, Residential Mobility (Including Mobility out of Central Chicago/L.A.) and Baseline Neighborhood Income, Family Income, Education, HH Size, Homeowner, Employment, and Marital Status



<u>Notes:</u> 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.