The Machines of Opportunity or the Engines of Inequality?  
American Cities and Intergenerational Mobility over the Twentieth century

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Introduction

The United States is often hailed as the “land of opportunity,” a “nation of immigrants” and a country offering opportunities to hardworking families. Is this reputation deserved? Recent studies show large geographical variation within the United States in intergenerational mobility outcomes and suggest that there is no clear answer to this question (Chetty & Hendren, 2015; Chetty, Hendren, Kline, & Saez, 2014). The expansion of the American Frontier provided opportunities for upward mobility in the 19th century (Long & Ferrie, 2013) but in the 20th century, neighborhoods and cities solidified as the centers of opportunity and stratification (Rothwell & Massey, 2015; Sampson, 2012; Storper, 2013). However, no study (known to the author) has analyzed how city and regional effects on mobility might vary over time and whether these effects are sensitive to periodic shocks or to changes in local population or occupational structures. In this project I ask two related questions:

- How persistent are social mobility rates across cities and regions over time?
- What factors lead to change or persistence in regional mobility rates?

To answer these questions I will build a new panel dataset of cities to analyze persistence in social mobility over time. I will do this by estimating social mobility rates across cities in the early 20th century and link these observations to the contemporary estimates produced by Chetty et al. (2014). Before attempting to extend the series further back in time, I will pilot a link from 1920-1940 to 1970-2000. I will use this series to examine spatial persistence in intergenerational outcomes and to test whether factors such as urbanization, ageing, the availability of schooling or selective migration can account for changes in aggregate mobility outcomes. This work has direct implications for policy-makers interested in creating more egalitarian cities in the future.
**Social Mobility in the United States**

The idea of the United States as a “land of opportunity” is being scrutinized by social scientists. Studies suggest that opportunities for upward mobility among children born into low income families have declined over the last century (Long & Ferrie, 2013; Piketty, 2014) or are lower than previously believed (Chetty, Hendren, Kline, Saez, & Turner, 2014; Clark, 2014; Mazumder, 2005; Solon, 1992). Low rates of upward mobility are of particular concern in light of the precipitous 40 year increase in income inequality.

The geographically disaggregated estimates of social mobility from Chetty et al. (2014) provide some cause for optimism. Their findings show that school funding, local income inequality, racial segregation and social cohesion affect spatial variation in mobility rates. This implies that policy can have a role in promoting greater equality in opportunity. My study adds to this research in two main ways. First, while the study of Chetty et al. is an intergenerational analysis, it is effectively cross-sectional at the scale of the city. Their analysis predicts mobility levels across space but not the determinants of change. Second, this will be the first study to analyze persistence in mobility outcomes in the US context. This study of persistence is necessary to assess how long-run processes or institutional arrangements might affect intergenerational outcomes.

**Project Outline & Data**

I will draw on two main sources of data to complete this project: the regional mobility estimates from 1970 to 2000 provided by the Equality of Opportunity Project\(^1\) and the decennial complete-count censuses of the United States from 1940 and earlier. This historical data has been provided by the Minnesota Population Center and Ancestry.com.\(^2\) I will use these historical datasets to produce estimates of intergenerational mobility at a geographical scale that can be linked to contemporary mobility estimates. I will estimate social mobility rates across historical cities using longitudinal samples of men, which I have constructed using record linkage techniques.

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\(^1\) Data are available at http://www.equality-of-opportunity.org/

\(^2\) I have been working with these datasets on the NBER server as part of Leah Boustan’s research team since 2014.
(Abramitzky, Boustan, & Eriksson, 2012; Connor, 2015). I have already begun linking mobility estimates from 1920-1940 to the contemporary period.

The length of time covered by the final series of regional mobility estimates is contingent on my success in dealing with two factors: definitional changes in geographical boundaries and shifts in the spatial distribution of the American population over time. The enumerative definition of city boundaries are subject to change over time. Thus, a portion of the Treiman Fellowship would be allocated to pay an undergraduate research assistant with GIS skills to help with reconfiguring historical boundary data. This is necessary to generate consistent estimates at the level of individual cities. Dealing with the issue of population shifts will require a series of analyses where I will identify a subset of cities that are of relatively high density in all observed time periods. I will provide a focused analysis of the trajectories of these cities.

**Preliminary Findings**

I have already created the first iteration of the historical mobility dataset and started a preliminary analysis. I calculated 1920-1940 estimates of intergenerational mobility from a new sample of five million linked fathers and sons, and for counties, net of family background. At the national level, I find high rates of intergenerational mobility in the past and an intergenerational elasticity estimate that is almost identical to that found by Parman (2011) for the same period.\(^3\) Figure 1 also shows considerable spatial heterogeneity in social mobility outcomes across counties. These historical findings look distinctly different to contemporary estimates of mobility. Specifically, social mobility appears to have been higher in the South in the past than today. Counties in the Western United States show similar levels of heterogeneity compared to today and particularly low levels of mobility in areas with large Native American populations.

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\(^3\) In my trial analysis I find an IGE of around 0.2.
Dylan Connor

Treiman Fellowship Application

Figure 1. Geography of Social Mobility from 1920 to 1940
Note: estimates are relative to New York. Yellow = high mobility, brown = low mobility.

There appears to be very weak spatial persistence in social mobility outcomes across counties. Figure 2 plots the standardized 1920-1940 mobility estimates against their corresponding 1970-2000 levels. This weak temporal correlation in the county estimates suggest that there is scope to try and explain change in mobility over time. Inconsistency in spatial mobility patterns could be explained by the rapid urbanization of the Western and Sunbelt regions of the United States, which has led to a dramatic shift in the demography of the United States over the 20th century. My next steps are 1) to examine whether this weak relationship is consistent in a comparison of cities over the same period and 2) to reassess the relationship between mobility in the two periods after adjusting for shifts in the spatial distribution of the US population.

Next Steps
This project would be the fourth chapter of my dissertation. Over the last three years I have worked on historical social mobility, within and between generations, in the United States. I have presented my first and second chapters at the Population Association of America (PAA). I would plan to present this paper for the third consecutive year at the PAA in 2017. My aim is to submit
this project for publication at *Demography*. I believe this paper would be of broad interest to demographers, geographers, economists and sociologists.

I would use the Treiman Fellowship for two purposes. First, constructing consistent city boundaries over the last century is taxing. I would employ a UCLA undergraduate to assist me with this task in the summer of 2016. Second, I would use the remainder of the funding as summer stipend and for travel to the PAA in 2017.

**Timeline: Begin Fellowship, June 13, 2016**

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<td>May '16</td>
<td>Continue analysis of counties and begin outlining variables for the regression analysis.</td>
<td>Nov '16</td>
<td>Complete first full analysis addressing questions one and two from proposal.</td>
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<td>Jun '16</td>
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<td>Dec '16</td>
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<td>Jul '16</td>
<td>Harmonize geographic data and produce a full set of estimates for US cities.</td>
<td>Jan '17</td>
<td>Write first draft of paper for PAA and prepare figures and tables.</td>
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<td>Aug '16</td>
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<td>Mar '17</td>
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<td>Sep '16</td>
<td>Begin analyzing persistence and change in social mobility outcomes and their determinants. Prepare PAA abstract.</td>
<td>Apr '17</td>
<td>Prepare paper for submission to <em>Demography</em> and file as last chapter of dissertation.</td>
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**References**


