Forced Relocation and Residential Instability among Urban Renters

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ABSTRACT   Residential instability often brings about other forms of instability in families, schools, and communities that compromise the life chances of adults and children. Social scientists have found that low-income families move frequently without fully understanding why. Drawing on novel data of more than 1,000 Milwaukee renters, this article explores the relationship between forced relocation and residential instability. It finds that low incomes are associated with higher rates of mobility due to poorer renters' greater exposure to forced displacement. Not only do higher rates of formal and informal eviction, landlord foreclosure, and building condemnation directly increase the mobility of poorer renters, but forced displacement also increases subsequent unforced mobility. A forced move often compels renters to accept substandard housing, which drives them to soon move again. This article reveals mechanisms of residential mobility among low-income renters, identifies previously undocumented consequences of forced displacement, and develops a more comprehensive model of residential instability and urban inequality.

INTRODUCTION

Low-income Americans have high rates of residential instability. Between 2005 and 2010, half of all households below the poverty line moved at least once (Ihrke and Faber 2012; see also Phinney 2013). Poor children are almost twice as likely to experience acute residential instability than their wealthier counterparts, moving more than six times before adulthood (Wood et al. 1993). That low-income families move often is well known; why they move is a question that remains largely unresolved.

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Identifying the mechanisms of residential mobility among low-income families is important because residential stability can reinforce family, educational, and neighborhood stability (Evans 2004). When a family moves, children often change schools and must make new friends, adults must integrate into new neighborhoods, and both the sending and receiving communities must adjust to new arrivals (Been et al. 2011; Sampson 2012). Residential instability has been linked to a wide array of social and health disparities (Jelleyman and Spencer 2008; Sharkey and Sampson 2010). Understanding why families move would promote our understanding of those disparities and could inform policy solutions aimed at stabilizing disadvantaged families and communities.

Drawing on novel data of more than 1,000 Milwaukee renters, this article explores, through statistical analyses, the relationship between forced relocation and residential instability. We examine the degree to which low-income renters exhibit higher rates of residential mobility than better-off renters because they experience higher rates of forced displacement. This study also investigates if forced mobility contributes to higher rates of subsequent unforced mobility, as families seek to move quickly from substandard housing they were compelled to accept in the hurried aftermath of an eviction. Do urban renters whose most recent move was forced live in lower-quality housing, compared to those who did not experience forced displacement? Are urban renters who experienced a forced move more likely to undertake an unforced move soon thereafter, compared to those who did not experience forced displacement? Together, these research questions explore the link between residential instability, forced displacement, and housing quality.

MOVING FOR ATTAINMENT OR NECESSITY?

If residential instability is a driver of social inequality and health disparities (e.g., Haynie and South 2005; Jelleyman and Spencer 2008), then a crucial question for social scientists and policy makers is why families move. This question is especially pertinent in regard to low-income families, who not only exhibit high rates of residential instability but also have fewer resources that can be marshaled to buffer the negative effects of a move.

Social scientists trying to understand why low-income families move as much as they do mainly have built on the residential attainment model, which perceives mobility as the result of social climbing (Logan and Alba

1993; South and Crowder 1997). When people move, they try to move up, parlaying economic capital for residential advantage. Spatial location is understood to be the outcome of an "individual-level attainment process" involving families "upgrading from central-city slums to working-class neighborhoods to suburbs" (Logan and Alba 1993, 243–44).

According to the residential attainment perspective, moving typically is volitional, beneficial, and associated with upward mobility and residential satisfaction. Much of the residential mobility literature bears the imprint of this perspective as well as an intentionality bias, taking for granted that relocations are self-actuated and intentional. To Greg Duncan and Sandra Newman (2007, 174–75), for example, "moves are, for the most part, rational, deliberate, and planned. . . . The sequence begins with a desire to move and proceeds to crystallized intentions or plans and finally to the move itself." Yet many moves undertaken by low-income families in fact are involuntary and harmful, especially in the case of forced displacement. This suggests a different perspective on residential mobility, which we call the residential instability model.

Peter Rossi's classic book *Why Families Move* ([1955] 1980) generally is remembered for explaining residential mobility as the result of life cycle changes, but Rossi also writes a fair deal about forced moves. He classifies almost 40 percent of the moves in his study as forced due to events such as eviction, building demolition, or severe income loss. New York City processes roughly 350,000 housing courts cases a year and most allege nonpayment of rent (Brescia 2009). Milwaukee, a city of just 104,720 renter households—and the setting of this study—sees 16 court-ordered evictions a day, with 1 in 14 renter-occupied households in inner-city black neighborhoods evicted annually (Desmond 2012*b*). Most evictions are attributed to nonpayment of rent. A recent survey of tenants in eviction court found that one-third devoted at least 80 percent of their household income to rent and that 92 percent received an eviction notice for falling behind (Desmond et al. 2013). It does not take a major life event (i.e., death, divorce) to cause severely housing-burdened families to miss a rent payment; pedestrian expenses or setbacks such as a reduction in work hours or a public benefits sanction can cause families to come up short with the rent.[1]

1. In recent decades, the incomes of the poor have fallen or flat-lined, rents have soared, and housing assistance has not been extended to meet growing need (Schwartz 2010). As a

Far from being associated with social mobility or prosocial outcomes, forced mobility has been linked to downward moves with respect to neighborhood quality as well as to a number of adverse individual-level effects (DeLuca, Garboden, and Rosenblatt 2013). A recent study finds that renters who experienced a forced move relocated to neighborhoods with higher poverty and violent-crime rates than the neighborhoods from which they were evicted (Desmond and Shollenberger 2013). Eviction and other kinds of forced moves also have been linked to material hardship and homelessness (Burt 2001; Hartman and Robinson 2003), and the resulting trauma has been associated with mental health problems and even suicide (Serby et al. 2006; Manzo, Kleit, and Couch 2008).

TOWARD A MORE COMPREHENSIVE MODEL OF RESIDENTIAL MOBILITY AMONG URBAN RENTERS

The residential attainment and residential instability perspectives present complementary outlooks on why households move and what moving means for their life chances. These perspectives can be combined into a more comprehensive model of the relationship between residential and financial stability. This model is predicated on the simple but underappreciated recognition that some city dwellers move because they are forced to and some move because they desire to. We expect the incidence of forced moves to decline with income and the incidence of unforced moves to increase with income. Combining these two trends into a single model suggests three broad types of mobility among urban renters corresponding to their economic position: forced mobility (e.g., eviction), immobility (staying in the same home over time), and unforced mobility (e.g., voluntarily moving to a bigger apartment). We expect forced mobility to be more prevalent among financially insecure renters, unforced mobility to be more prevalent among financially secure renters, and immobility or residential stability to be more prevalent among renters who fall in between those two groups in the income distribution (Coulton, Theodos, and Turner 2012; Phinney 2013). This is illustrated in figure 1.

Our proposed model focuses on the experiences of urban renters. Nationwide the majority of low-income families live in rental housing, and most receive no federal housing assistance (Retsinas and Belsky 2008). To

result, most poor renting families in America now devote over half of their income to housing costs (Desmond 2015).
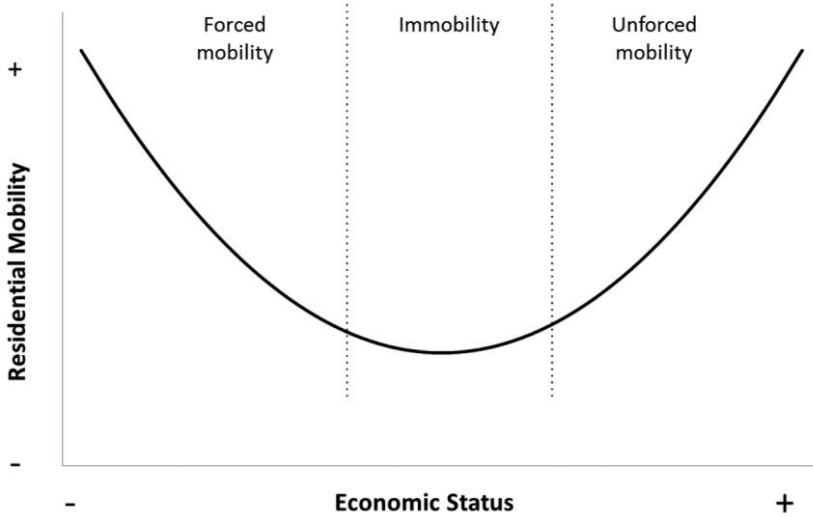
FIGURE 1. Theoretical model of the relationship between residential mobility and economic status among urban renters.

focus on urban renters in the private market then is to focus on the housing experience of most low-income families living in cities.[2] When we compare financially insecure and financially secure renting households, we are comparing variations of economic standing within an urban rental population. The same is true when we posit that unforced mobility increases with economic standing. We would expect residential mobility to taper off at some point along the life course, as renters arrive at a certain age or financial level or transition into homeownership. In most cities, an urban rental population is composed of some upper- and middle-class households and most of the cities' low-income households who are excluded both from homeownership (owing to poverty or debt) and public housing (owing to the number of eligible households far outnumbering the number of subsidized units).

The experiences of those who experience forced moves will most closely correspond to the residential instability perspective. These households disproportionately move because they are forced to move, and moving under duress, often with the blemish of eviction on their record, contributes to their relocating to substandard housing. The experiences of those who

2. Throughout, we keep the focus tightly on the private rental market—where the vast majority of low-income families live, unassisted—and therefore do not engage with the literature on (uncommon) mobility interventions.

undertake unforced moves, on the other hand, will most closely correspond to the residential attainment model. These households move because they want better housing or better neighborhoods. The experience of the residentially immobile, those somewhere in between financial insecurity and security, are reflected in neither the residential attainment nor the residential instability models, precisely because these families stay put. They are not so poor that they frequently experience forced displacement, but neither can they move to get ahead by relocating to a safer block or a better apartment. Together, these considerations lead us to hypothesize that, among urban renters, those at both tails of the income distribution (the financially insecure and secure) will have higher rates of residential mobility than those in the middle of the distribution (hypothesis 1).

If the moves of very poor renters often are forced displacements such as landlord foreclosures, building condemnations, formal court-mediated evictions, or informal evictions in which landlords pressure tenants to leave short of taking full legal action (Hartman and Robinson 2003), then in the absence of forced moves these families might very well enjoy a degree of residential stability. This leads us to our second hypothesis: because forced moves mediate the association between income and mobility, income will not be statistically associated with residential mobility after controlling for forced relocations (hypothesis 2).

FORCED MOVES AND SUBSEQUENT RESIDENTIAL INSTABILITY

If involuntary displacement results in renters moving into dilapidated housing units, then these renters may be anxious to quickly relocate to more desirable units once they get back on their feet. Consider, for example, the experiences of the Hinkstons, an African American family an author of this study met while conducting fieldwork among low-income tenants and their landlords in Milwaukee (Desmond 2012*a*, 2012*b*).[3] Doreen (44), a single mother of four who received disability payments, was the oldest member of the Hinkston household, followed by her two oldest daughters, Patrice (25), herself a single mother of three, and Natasha (19). The Hinkstons lived for 5 years in a five-bedroom house in a low-income and segregated, but fairly

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3. All names in this paragraph are pseudonyms.

stable, neighborhood. When Doreen spent money to help a sister affected by Hurricane Katrina, this unexpected expense led the family to be evicted. Eager to avoid a homeless shelter, the Hinkstons moved into a run-down, two-bedroom apartment in a high-crime, inner-city neighborhood where a landlord was willing to overlook Doreen's eviction record. "They were rushers," their landlord later explained, acknowledging the poor condition of the unit. "They moved in on top of roaches." The apartment was far too small for a family of eight—no one's bed was theirs alone—and toilets and sinks would remain stopped up for days, an external door fell off its hinges, and there were so many roaches that Doreen planned to leave all the furniture in the apartment when they eventually left it. "We took this [apartment] because we were desperate," Doreen said. "But we not gonna be here long." The family soon started looking for better housing. In a year's time, the family was able to voluntarily move to a better apartment. On being asked if she looked forward to moving, Doreen's youngest daughter (13) answered, "Of course. I hate this house."

The Hinkstons likely would not have moved from their five-bedroom house had they not been evicted, nor would they have moved from the second, roach-infested apartment had it not been so small and run-down. Housing dissatisfaction was a key mechanism linking their first, forced move to their subsequent, unforced relocation. Based on experiences like those of the Hinkstons, we hypothesize that urban renters whose most recent move was forced will live in lower-quality housing, compared to those who did not experience forced mobility (hypothesis 3). We also hypothesize that urban renters who experienced a forced move will be more likely to undertake an unforced move soon thereafter, compared to those who did not experience forced mobility (hypothesis 4).

Taken together, our four hypotheses posit multiple residential trajectories among urban renters. We expect financially secure renters to exhibit heightened rates of voluntary mobility aimed at gaining residential advantage or improved housing conditions. We expect financially insecure renters to exhibit heightened rates of involuntary mobility, moving because they must. Involuntary mobility by definition causes residential instability, but we expect that in many cases the influence of a forced move on residential mobility will last beyond the relocation immediately following eviction because those relocating under duress often accept subpar housing but soon after look to move to better conditions.

DATA

Designed to collect new data related to housing, poverty, and urban life, the Milwaukee Area Renters Study (MARS) is an in-person survey of 1,086 households in Milwaukee. One person per household, usually an adult leaseholder, was interviewed. The MARS instrument is composed of more than 250 unique items and was administered in English and Spanish. The University of Wisconsin Survey Center supervised data collection, which took place between 2009 and 2011.[4]

The MARS sample was limited to renters. As in many cities, Milwaukee's renters are poorer than its overall population. Comparing the weighted MARS sample to 2010 US Census data, we see that the median annual household income among Milwaukee renters is almost $5,500 lower than that of the city's population ($30,398 vs. $35,851).

Milwaukee is a strategic setting in which to investigate the experiences of urban renters for at least three reasons. First, the characteristics of Milwaukee's residents and rental market are comparable to those of many American cities. In racial composition, population size, and unemployment rate, Milwaukee is similar to many midsize American cities. Just over half of Milwaukee's housing units (52 percent) are occupied by renters, similar to the proportions of Chicago, Houston, Dallas, San Diego, Columbus, and Baltimore (National Multi Housing Council 2009). In terms of median rent, Milwaukee County falls in the most expensive third of the country, ranking 1,420th out of 4,763 counties in the United States and Puerto Rico. Cities with similar rent distributions include Portland, OR; Charlotte, NC; Gary, IN; and Baton Rouge, LA (US Department of Housing and Urban Development 2009). Second, renter protections in Milwaukee are fairly typical. Cities with a stalwart tradition of tenant unionizing and an economically diverse rental population such as New York and Boston tend to boast of toothier tenant protections than those like Milwaukee, in which most middle- and upper-class households own their homes. But most cities' renter protections more closely resemble Milwaukee's than New York's or Boston's (Manheim 1989). Third, Milwaukee is one of many understudied cities within urban sociology. Data on New York, Chicago, and Los Angeles

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4. The MARS survey took place in the wake of the foreclosure crisis. Although foreclosures of rental property increased during the crisis (Been and Glashausser 2009), evictions in Milwaukee actually declined (Desmond 2012*b*). These opposing trends may somewhat cancel out one another.

are readily available, but there are fewer data on many other cities such as Milwaukee, Cincinnati, and Buffalo (Small 2007). Studying Milwaukee not only expands data on and knowledge of different urban environments; it also may produce findings that are more applicable to cities distinct from America's important yet exceptional global hubs.

Households were selected through multistage stratified probability sampling. Drawing on census data, all Milwaukee block groups were sorted into three strata based on racial composition. No block groups were excluded from the sampling frame. Block groups were placed in white, black, or Hispanic strata depending on the race of the largest proportion of residents.[5] Then, each of these strata was subdivided into high- and low-poverty neighborhoods based on the overall income distribution of each racial or ethnic group in the city.[6] Blocks from within each of these six strata (which were based on block group boundaries, the smallest geographic unit for which income data were available) were randomly selected. When a block was selected into the sample, interviewers visited every household in the selected block, saturating the targeted areas. This sampling strategy resulted in renting households from across the city being included in the study, including those in low-poverty and racially integrated blocks. The MARS study drew from 168 of 591 unique block groups, representing 28 percent of Milwaukee neighborhoods. After data collection, the full sample was weighted to facilitate estimates generalizable to Milwaukee's rental population. We use these custom weights in our descriptive statistics.

According to the American Association for Public Opinion Research (AAPOR), the most conservative calculation of a response rate (AAPOR response rate 1) places in the numerator only fully completed interviews and in the denominator refusals and all cases of unknown eligibility. According to this metric, MARS has a response rate of 83.4 percent.

MARS collected a complete 2-year retrospective residential history for each respondent. To prime memory, respondents were shown a 2-year calendar and asked to provide their birthday and to name "two or three

5. Some block groups did not have a clear racial majority, but as in many other American cities, the racial composition of Milwaukee neighborhoods follows a U-shaped distribution with most residents living in highly segregated neighborhoods.

6. Block groups were classified as high-poverty neighborhoods if their poverty rate exceeded 47 percent for predominantly Hispanic neighborhoods, 54 percent for predominantly African American neighborhoods, and 19 percent for predominantly white neighborhoods.

things that have happened in the past two years that really stand out." Then, going back 2 years, interviewers asked respondents to list "all the places [they had] lived or stayed for at least a month." Respondents were asked several questions about each residence, including why they moved from one place to another. Retrospective data are most reliable if they have to do with salient life events, are limited to a recent recall period, and are collected with the aid of a memory prop (Beckett et al. 2001; Sayles, Belli, and Serrano 2010). This study's retrospective data meet all three criteria: they focus on the memorable event of moving, are restricted to a 2-year recall period, and were collected with a recent history calendar designed to prime memory.

Surveys that simply ask respondents if they have been evicted during a certain time period, such as the American Housing Survey, likely result in sizable underestimates of the frequency of forced mobility among low-income families. As one of the authors learned during fieldwork, because tenants often have strict understandings of what constitutes eviction, many who experienced involuntary removal would not report as much if asked in a straightforward way. This is why studies based on court records (Desmond 2012*b*) produce much larger estimates of the frequency of eviction than those based on self-reports. Informed by ethnographic work among urban renters, the MARS survey implemented new techniques designed to collect reliable data about renters' motivations for moving. Interviewers asked each respondent a series of ordered yes/no questions, beginning with forced removals and ending with unforced moves.

1. An eviction is when your landlord forces you to move when you don't want to. Were you, or a person you were staying with, evicted?
2. Did you, or a person you were staying with, [leave after receiving] an eviction notice?
3. Did you move away from this place because your landlord told you, or a person you were staying with, to leave?
4. Did you move away from this place because you, or a person you were staying with, missed a rent payment and thought that if you didn't move you would be evicted?
5. Did you move away from this place because the city condemned the property and forced you to leave?
6. Did you move away from this place because (*a*) the landlord raised the rent; (*b*) the neighborhood was dangerous; (*c*) the landlord wouldn't fix anything and your place was getting run down; (*d*) the landlord went into foreclosure?

Respondents who answered no to question 1 were asked question 2, and so on. If a respondent answered no to all of these questions, she or he finally was asked, "I see that none of these reasons fit your case. Why did you move away from this place?" This approach minimized recall bias about the motivations for moves. It also allowed us to capture a wide variety of forced mobility. To our knowledge, the MARS database offers the most comprehensive data to date on forced displacement in a representative sample of urban renters.

We recorded all residential moves renters undertook 2 years prior to being surveyed. A move is considered to be forced if it was initiated by landlords or city officials (e.g., code inspectors) and involved situations in which tenants had no choice other than to relocate (or thought as much). Forced moves include formal evictions (which are processed through the court), informal evictions (which are not), landlord foreclosures, and housing being condemned. All other moves we consider unforced. These include purely voluntary moves often carried out to gain residential advantage, as well as moves responding to deteriorating housing or neighborhood conditions (e.g., rent hikes, escalating violence).

METHOD

MODELING THE NUMBER OF MOVES

We use one set of models to address hypotheses 1 and 2. To explain the number of moves renters undertook in the 2 years prior to being surveyed, we fit a negative binomial regression model. This model is appropriate for count data and allows for overdispersion.[7] In the full model, the predicted outcome for respondent i, Moves$_i$, is related to the independent variables through the log-link function:

$$
\begin{aligned}
\log(\text{moves}_i) = {} & B_0 + B_1 \text{forced move}_i + B_2 \text{income}_i + B_3 \text{income}_i^2 \\
& + B_4 \text{black renter}_i + B_5 \text{Hispanic renter}_i \\
& + B_6 \text{other race renter}_i + B_7 \text{less than HS degree}_i \\
& + B_8 \text{some college}_i + B_9 \text{bachelor's degree or more}_i \\
& + B_{10} \text{female renter}_i + B_{11} \text{married}_i \\
& + B_{12} \text{children in household}_i + B_{13} \text{age}_i \\
& + B_{14} \text{criminal record}_i + B_{15} \text{past job loss}_i \\
& + B_{16} \text{past breakup}_i.
\end{aligned}
$$

7. Using Poisson or zero-inflated models did not substantively alter our findings.

To test our first hypothesis (that financially insecure and secure renters will have higher rates of residential mobility), we examine the association between household income and its quadratic term and the number of moves that renters experienced in the previous 2 years. Household income was measured at the time of the interview. Owing to validity limitations, retrospective income data were not collected. This is limiting insofar as income may fluctuate over the study period. Our models do account for more stable markers of socioeconomic status, such as renters' highest levels of education, as well as for two time-varying life events related to household income and residential mobility: job loss and the end of a self-defined serious relationship. We created dummy variables that indicate whether or not a respondent had experienced these shocks 13–24 months prior to being interviewed.

Our models also control for a number of other relevant factors. Because racial dynamics often influence mobility decisions (South and Crowder 1997), we control for renters' race and ethnicity, defined as white, black, Hispanic, or other ethnicity. Because residential mobility tends to decrease over the life course, we control for age. We also observe renters' gender, marital status, and if they have children under age 18 in the household, as these factors have been linked to residential mobility and particularly to forced mobility (Desmond et al. 2013). Individuals with criminal records may exhibit higher rates of residential instability, either because they rely on others for housing or because they are on the run (Western 2006; Goffman 2009). Accordingly, we create a dummy variable that indicates whether a renter has a criminal record.

To assess our second hypothesis (that income will not be statistically associated with residential mobility after controlling for forced relocations), we investigate if accounting for forced mobility weakens the statistical association between income and residential instability in the regression model. Specifically, we observe if renters experienced a forced move 13–24 months prior to being interviewed. Focusing only on forced moves that occurred in year 1 of the 2-year retrospective calendar allows for enough time to pass to observe an association, should one exist, between forced mobility and the likelihood that a renter will move again. In models that control for forced moves, we do not count the first forced move (during the 13–24 months prior to being interviewed) in the outcome variable (total moves). This adjustment ensures that in these models the first forced move is represented only on the right-hand side of the equation and so is not simply explaining itself.

MODELING HOUSING QUALITY AND SUBSEQUENT MOBILITY

To assess hypothesis 3, that urban renters whose most recent move was forced will live in lower-quality housing than renters whose last move was not forced, we estimate the effects of forced mobility on housing quality. In these analyses, our outcome is a variable indicating whether renters experienced any of the following problems in the year prior to being interviewed: (*a*) a broken stove or other appliance, (*b*) a broken window, (*c*) a broken exterior door or lock, (*d*) mice, rats, or other pests, (*e*) exposed wires or other electrical problems for at least three days, (*f*) no heat, (*g*) no running water, or (*h*) stopped-up plumbing for at least 24 hours. We also constructed a count variable measuring how many of these housing problems were experienced.

To estimate the effect of a forced move on housing quality, we use doubly robust logistic regression models. In these models, the predicted probability of an event for respondent *i*, p_i, is related to the independent variables through the link function:

$$
\begin{aligned}
\log[(p_i)/(1 - p_i)] = {} & B_0 + B_1 \text{forced move}_i + B_2 \text{income}_i + B_3 \text{income}_i^2 \\
& + B_4 \text{black renter}_i + B_5 \text{Hispanic renter}_i \\
& + B_6 \text{other race renter}_i + B_7 \text{less than HS degree}_i \\
& + B_8 \text{some college}_i + B_9 \text{bachelor's degree or more}_i \\
& + B_{10} \text{female renter}_i + B_{11} \text{married}_i \\
& + B_{12} \text{children in household}_i + B_{13} \text{age}_i \\
& + B_{14} \text{criminal record}_i + B_{15} \text{rental assistance}_i \\
& + B_{16} \text{past job loss}_i + B_{17} \text{past breakup}_i \\
& + B_{18} \text{residential tenure before move}_i \\
& + B_{19} \text{months in current home}_i.
\end{aligned}
$$

Estimates of the effect of a forced move may be biased if those who are most likely to experience such a move (because they lack the material or social resources to avoid one) also suffer disproportionately large effects from forced moves. Matching methods allow us to reduce estimation bias due to effect hetereogeneity by creating data sets that have similar multivariate distributions of covariates (balance) across groups of people who did and did not experience forced mobility. Matching achieves balance through pruning observations for which there are no good comparisons and weighting those that remain, resulting in the weighted distribution of covariates

being similar in both groups of individuals (Morgan and Winship 2007). The doubly robust regression uses weights produced by the matching program to adjust for imperfect covariate balance and, in this case, will provide an unbiased estimator as long as either the matching model or the regression model is correctly specified (Stuart 2010; Iacus, King, and Porro 2012).

To implement the doubly robust regression, we use coarsened exact matching. In the logic of matching, every renter who experienced a forced move ideally would be matched with a renter with identical covariates who did not experience a forced move; however, exact matching is virtually impossible when matching on multiple variables or continuous covariates. Coarsened exact matching compromises by treating continuous variables as categorical variables (e.g., a continuous measure of age is transformed into 10-year intervals) and then assigns observations to strata wherein every observation is an exact match on the full set of coarsened covariates. Coarsened exact matching then produces weights so that the sample is perfectly balanced in terms of these coarsened variables (Blackwell et al. 2009; Iacus et al. 2012).

We rely on previous research to select variables across which to improve balance. Because family structure and point in the lifecycle are associated with likelihood of eviction, we match on respondent's gender, marital status, age, and the presence of children in the household. We also match on respondent's race and ethnicity and on a variable indicating a criminal record, which can hamper one's housing prospects. To account for socioeconomic status, we match on income and variables indicating whether the respondent has no degree, a high school degree, or some college education. We also consider an integer variable measuring the number of months respondents lived in the residences from which they were involuntarily removed. If respondents did not experience a forced move, this variable measures how long they have lived in their current residence. An uninterrupted housing spell is an indication that the respondent has a low latent propensity for forced moves. And because we focus on housing problems that renters experienced in the previous year in their current residence, we add a variable to the doubly robust regression that measures how many months the respondent was living in the current residence out of the previous 12 months.[8]

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8. Roughly 6 percent of households in Milwaukee's private rental market (and in the weighted MARS sample) receive housing assistance (Pabst 2013). Controlling for housing assistance had no effect on our main findings.

We were able to perform exact matches on gender, marital status, the presence of children under 18 years of age in the household, race/ethnicity (black and Hispanic), criminal record, and education. We coarsened age, income, and residential tenure before matching, choosing sample quartiles as cut-points. We refined our matching specification with the goal of improving either sample size or multivariate balance across the entire set of variables discussed above. Multivariate balance is measured by the L1 statistic (using the Scott method for breaks) with lower values representing more balance (Blackwell et al. 2009). Because achieving the best multivariate balance often required sacrificing sample size, we fit each of our models on two matched samples: one with a moderate sample size but a moderate L1 and another with a small sample size but a lower L1.

To estimate the average effect of a forced move through doubly robust regression, we regress unforced moves on our set of matched variables in addition to other variables related to housing quality. As in our negative binomial models, we control for job loss and the end of a serious relationship 13–24 months prior to being interviewed and prior to the first forced move (if any). Finally, we control for household income squared, receipt of rental assistance, and "other" ethnicity because respondents were not matched on these covariates. In the appendix, we display summary statistics of our key variables (table A1).[9]

Last, to address hypothesis 4, that urban renters who experienced a forced move will be more likely to undertake an unforced move soon after, we estimate the effect of having experienced a forced move on the likelihood of undertaking a subsequent unforced move.[10] Analyses estimating the effect of forced mobility on subsequent unforced mobility are similar to those estimating its effects on housing quality; we use matching to improve balance across the same variables considered in the models estimating housing quality.[11]

9. Owing to space constraints, and because the LI statistic is the best indicator of multivariate balance across groups of renters who do and do not experience a forced move, we have excluded summary statistics for our matched data, but they are available upon request.

10. As expected, the association of a forced move with making any kind of subsequent move (forced or not) is statistically significant and noticeably larger than the estimated association of a forced move with making a subsequent unforced move, as in the displayed models.

11. The variable "tenure before move" covers a different set of residences in the housing quality models than in the moving models. Accordingly, the optimal matching specification differs between these models.

Because we wish to determine if having experienced forced removal increases the chances of future unforced mobility, we first observed whether respondents experienced a forced move during the first year of our retrospective calendar (i.e., 13–24 months prior to being interviewed). Respondents who did were placed in the forced-move group. We next observed whether respondents voluntarily moved in the second year of the retrospective calendar. We assigned those respondents who moved a 1 on the unforced moves variable. This approach guarantees at least 1 full year of observation after the forced move.[12]

RESULTS

THE FREQUENCY AND MOTIVATION OF MOVES
AMONG MILWAUKEE RENTERS

We display in table 1 the number of recent moves undertaken by renters by income quartile. In the MARS sample, households with incomes less than $12,204 belong to our first quartile, and those with incomes above $32,400 fall into the fourth. Because mobility patterns of the renters in the second quartile closely resembled those in the third, resembling natural breaks in the data, and because our theoretical model postulates three mobility processes corresponding to one's income with more renters belonging to the middle of the distribution than the tails, we combine the second and third income quartiles into a single category. These renters live in households with incomes between $12,205 and $32,400.

Table 1 shows that roughly half of Milwaukee's renters relocated at least once in the 2 years prior to being interviewed. Nearly 34 percent moved once, and nearly 16 percent moved more than once. Roughly 42 percent of the poorest renters in Milwaukee moved in the 2 years prior to being interviewed, compared to 56 percent of the city's most financially secure

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12. It has the added benefit of conservatively biasing our estimates of the effect of a forced removal toward zero by misclassifying as "forced move without subsequent move" (subsequent unforced move = 0) instances in which (*a*) the forced and subsequent unforced move both occur in the first year; or (*b*) a forced move occurs in the first year but the unforced move occurs after the interview. Similarly, we conservatively misclassify cases in which the forced move occurs before the start of the retrospective calendar (but the subsequent unforced move is observed) as "subsequent move without forced move" (subsequent voluntary move = 1).

TABLE 1. Residential Relocations by Income Quartile

	Moves in Previous 2 Years		
	0	1	2+
1st quartile	58.38	25.08	16.54
2nd and 3rd quartiles	51.26	40.86	7.88
4th quartile	44.24	29.46	26.30
Total	50.33	33.82	15.85

Note.—Weighted percentages displayed. Renters in the 1st quartiles live in households with annual incomes less than $12,204. Those in the 2nd and 3rd quartiles live in households with annual incomes between $12,205 and $32,400. Those in the 4th quartile live in households with incomes above $32,400. $N = 989$ renters.

renters and 49 percent of renters in the middle group. At first glance, residential instability among urban renters does not appear to rise the further one falls down the economic ladder. That one in six renters moved two or more times within a 24-month period implies that a nontrivial percentage experience relatively high levels of residential mobility. Among Milwaukee renters, those on each tail of the income distribution are more likely to have undertaken multiple moves. While less than 8 percent of renters in our second and third quartile reported having moved two or more times recently, 16.5 percent of renters in the first quartile and 26.3 percent of renters in the fourth quartile did.[13]

Table 2 displays the percent of forced and unforced moves by income quartile. Roughly 17 percent of the moves Milwaukee renters undertook in the 2 years prior to being surveyed were forced. The city's poorest renters were more likely to have experienced forced mobility, with almost one in four recent moves undertaken by those in the lowest income quartile being forced. By comparison, a little over 1 in 7 of the recent moves undertaken by renters in the highest income quartile were forced. This difference, involving the frequency of forced mobility among renters in the first and fourth income quartiles, is statistically significant ($p < .05$). The frequency of forced mobility among renters, even the most financially stable

13. Comparisons between renters who had not recently moved and those who did revealed a statistically significant difference only between the first and fourth income quartiles ($p < .01$). Comparisons between renters who had experienced two or more recent moves and those who had not (stayers and one-time movers) revealed statistically significant differences between all three groups, with the biggest differences generated when the second and third quartile group was involved in the comparison ($p < .001$).

TABLE 2. Move Type by Income Quartile

	Move Type	
	Forced	Unforced
1st quartile	23.33	76.67
2nd and 3rd quartiles	16.98	83.02
4th quartile	13.55	86.45
Total	16.67	83.33

Note.—Weighted percentages displayed. N = 710 moves in the previous 2 years.

in our sample, reinforces the importance of accounting for forced displacement when investigating the causes and effects of residential mobility.[14]

Table 3 increases the magnification, displaying the multiple types of moves that make up the forced and unforced relocations displayed in table 2. The most common type of forced move in our sample (44 percent) was informal eviction: landlord-initiated involuntary relocations that occur beyond the purview of the court. This implies that estimates of the frequency of eviction based on court records, estimates that themselves suggest eviction to be commonplace in poor neighborhoods (Desmond 2012b), have undershot the mark. Slightly over one in four forced moves was a formal eviction (27 percent). Tenants who experienced a formal eviction either received a court order to vacate the premises, received an eviction notice and moved before going to court (defaulting), or entered into a court-supervised agreement with a landlord (a stipulation agreement) that later resulted in eviction. An additional 20 percent of forced moves involved the foreclosure of rental property, owing to landlords falling behind on their mortgage payments (see Been and Glashausser 2009). Twelve cases involved the property being condemned by city inspectors as unfit for human habitation.[15] Four cases involved families moving in anticipation of a coming eviction notice.

14. As we have shown elsewhere (Desmond and Gershenson 2015), many forced moves, especially those among financially secure renters, are attributed not to tenant poverty or rent burden but landlord discretion or neglect, e.g., removing tenants for nonmonetary reasons. Virtually all forced moves experienced by the city's most financially secure renters were informal or formal evictions.

15. It bears amplifying that although researchers have focused significant attention on government-initiated forced displacement, such as urban renewal, we find that private market evictions outpace government-initiated forced moves by a very wide margin. As far as we can tell, no forced moves in our sample were executed on the basis of eminent domain.

TABLE 3. Forced and Unforced Moves in Detail (Weighted)

	N	% Subtype	% All Moves
Forced moves (N = 177)			
Informal eviction	78	.44	.11
Formal eviction	47	.27	.07
Landlord foreclosed	36	.20	.05
Condemned property	12	.07	.02
Anticipatory eviction	4	.02	.01
Unforced moves: responsive (N = 217)			
Housing problems	49	.23	.07
Neighborhood danger	38	.18	.05
Rent hike	21	.10	.03
Other/multiple reasons	20	.09	.03
Landlord dispute	18	.08	.03
Financial problems	24	.11	.03
Temporary arrangement	17	.08	.02
Family breakup or violence	16	.07	.02
Neighbor problems	6	.03	.01
Roommate dispute	8	.04	.01
Unforced moves: voluntary (N = 316)			
Independence	72	.23	.10
Housing upgrade	71	.22	.10
Other/multiple reasons	68	.22	.10
Proximity to kin or friends	33	.10	.05
Proximity to work or school	29	.09	.04
Save money	24	.08	.03
Neighborhood upgrade	6	.02	.01
Sentimental location	4	.01	.01
Find work	8	.03	.01
Approved for rent assistance	1	.00	.00

Note.—Moves are mutually exclusive. If a respondent listed multiple reasons for moving, we assigned their move to the category that most limited their choices and, therefore, was likely the most important driver of their move. This meant that forced moves were given more explanatory primacy than unforced responsive or voluntary moves and that responsive moves were given more explanatory primacy than voluntary moves.

Subcategories of unforced moves are more numerous than those for forced moves. For the sake of parsimony, our analyses pivot on the distinction between forced and unforced mobility. But here, because we seek to describe renters' moves in fine detail, we can further divide unforced moves into two types: those that are responsive and those that are voluntary. Responsive moves are motivated by housing or neighborhood conditions such as rent hikes, a deterioration in housing quality, escalating violence in the neighborhood, domestic violence, and relationship dissolution. Voluntary moves are intentional and unforced relocations, often carried out to gain residential advantage. These include moves to be closer to kin or

friends, school, or work, as well as to obtain housing and neighborhood upgrades.

The most common type of responsive move was that initiated by a housing problem (23 percent). Many tenants spoke of the need to leave units after their condition deteriorated. Eighteen percent of responsive moves were motivated by real or perceived neighborhood danger. Renters moved when they felt unsafe, perceived a growing gang presence, or were victimized by crime. In the words of one respondent, "*Nos robaron. Las puertas me rompieron.*" (We were robbed. They broke in the doors.) Another moved after her car was stolen; still another reported moving because "three people got shot three blocks from [her] house, and [she] didn't want to come home late." Ten percent of responsive moves were initiated after a landlord increased the rent; an additional 9 percent were attributed to a dispute with a landlord. Tenants cited the owner being "mean" or "greedy" or "coming into the house even when [they] were sleeping." Relationship dissolution or domestic violence, situations in which respondents wore out their welcome at temporary arrangements, and disputes with roommates or neighbors together accounted for roughly a third of responsive moves.

The most common type of voluntary move was motivated by a desire for independence (23 percent). These cases involved renters striking out on their own, leaving their parents or friends' places for their own units. As one respondent said, "It was time for me to move. Get out of my mom's place. It was time for a change, and I was pregnant, too." Several simply stated the need to have their "own place." Housing upgrades were the second most common reason for voluntary moves (22 percent). While responsive moves owing to housing problems were motivated by a negative impulse (the need or desire to leave dangerous or degrading conditions), voluntary moves seeking housing upgrades were motivated by a positive one, namely, desire for residential amenities. While an additional 22 percent of voluntary moves were propelled by multiple factors or motivations too idiosyncratic to categorize, 10 percent were undertaken out of a desire to be closer to friends and kin. An additional 9 percent were meant to put workers close to their places of employment or students closer to their schools, and 8 percent were motivated by a desire to save money. Only 2 percent of voluntary moves were explained by an explicit desire to obtain residential advantage (again, a positive impulse in contrast to the negative one to leave behind dangerous streets) (Wood 2014).

RESIDENTIAL MOBILITY AND ECONOMIC STATUS

Table 4 reports the results of three negative binomial regression models estimating the number of moves renters experienced in the previous 2 years. Incidence rate ratios (IRRs) and robust standard errors are displayed. Model 1 estimates the number of moves renters experienced based on their household income and its quadratic term. Figure 2 draws on the estimates of all three models shown in table 4 to illustrate the relationship between residential mobility and household income among Milwaukee renters.

In model 1 of table 4, the IRR for household income is below 1 and is marginally significant ($p < .10$), but the IRR for its squared term is above 1 and is significant ($p < .01$). This suggests that the likelihood of moving decreases as household income increases but that at some point as one climbs the economic ladder, the likelihood begins to spring up again. As shown in figure 2, model 1 estimates the likelihood of relocation to be highest among very poor renters, generating an estimation line that drops steadily with

TABLE 4. Negative Binominal Regression Modeling Number of Moves in Previous 2 Years

	(1)		(2)		(3)	
	IRR	SE	IRR	SE	IRR	SE
Annual household income ($10,000s)	.927	.042	.951	.042	.968	.045
Annual household income squared	1.011	.004**	1.009	.004*	1.007	.004
Black renter			1.089	.100	1.043	.103
Hispanic renter			.988	.114	.958	.122
Other ethnicity renter			.955	.219	.894	.219
Less than high school			1.157	.124	1.237	.142
Some college			.963	.091	.924	.093
Bachelor's degree or more			1.124	.137	1.148	.147
Female renter			1.072	.095	1.053	.103
Married			.847	.100	.832	.108
Children in the household			1.106	.097	1.030	.100
Age			.980	.003***	.977	.004***
Criminal record			1.287	.134*	1.202	.138
Job loss in previous 13–24 months			.922	.132	.853	.131
Breakup in previous 13–24 months			1.239	.147	1.286	.155*
Forced move in previous 13–24 months					1.306	.173*
Intercept	.876	.075	1.436	.257*	1.463	.277*
Ln alpha	−1.659	.342	−2.269	.587	−2.074	.575
Alpha	.190	.065	.103	.061	.126	.072
N	989		961		938	

Note.—Model 3 adjusts the dependent variable by subtracting one move for respondents who had experienced a forced move in the previous 2 years. IRR = incidence rate ratios. Robust standard errors are displayed.

* $p < .05$.
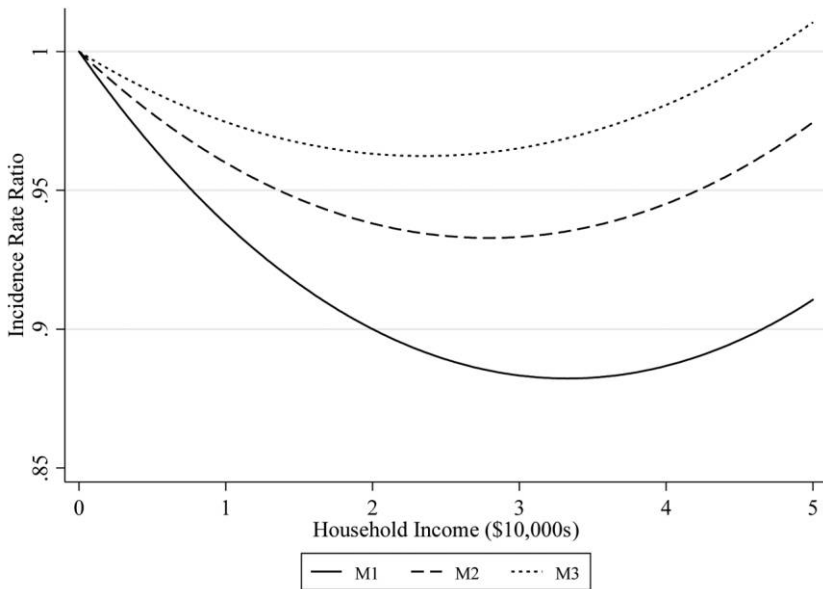** $p < .01$.
*** $p < .001$ (two-tailed).

FIGURE 2. Incidence rate ratios estimating the number of moves renters experienced in the previous 2 years, drawn from table 4 models 1, 2, and 3.

income gains, bottoms out for households making between $30,000 and $35,000, and increases at a shallow pitch for households making more.

In model l, the relationship between residential mobility and economic status is visualized as a downward slope with a slight uptick at the tail. Including our control variables in model 2 has the effect of reshaping this downward slope into a shallow bowl. The squared term for household income remains significant in this model, but levels of residential mobility no longer appear as heightened among very poor renters. In model 2, move counts fall until household income reaches $25,000. The line then flattens but begins to rise again for renters in households making more than $32,000. Model 2 supports our theoretical model postulating the relationship between economic status and residential mobility to be curvilinear. After controlling for race and ethnicity, education, family structure, criminal record, and recent shocks (job loss and relationship dissolution), we find support for hypothesis 1: residential mobility is highest among the most financially insecure and secure renters in our sample.

We also hypothesize that, among urban renters, the curvilinear relationship between economic status and residential mobility is driven by increased forced mobility on the lower end of the income distribution and increased unforced mobility on the higher end. If this is true, then low

income should not be associated with higher levels of residential mobility once we control for forced moves (hypothesis 2). This is precisely what we find. In model 3, which observes if renters experienced a forced move 13–24 months prior to being interviewed, the squared term for household income is reduced to marginal significance ($p < .10$), but the coefficient for forced moves is statistically significant and substantively large. All else equal, renters who experienced a forced move are expected to have a moving rate 1.3 times greater than those who avoided involuntary displacement. The picture that emerges from model 3 is almost a mirror image of the picture presented in model 1. Our full model implies that involuntary displacement helps to explain why the poorest renters in our sample move more than their better-off counterparts.

We also find that older renters experienced less residential mobility. Renters with a criminal record experienced more residential mobility, but this association becomes insignificant once we control for involuntary displacement. And model 3 finds that renters who experienced relationship termination 13–24 months prior to being interviewed had a higher moving rate, net of other factors.

In figure 2, the lifting of the estimation line for each subsequent model represents the estimated effect of income on residential mobility becoming less acute as more controls are introduced. Note that only in model 3 do we see an incidence rate ratio above 1. This suggests that if it were not for forced moves, financially secure renters would move more often than financially insecure renters.

If experiencing a forced move is associated with increased levels of residential mobility, there are two ways of interpreting this finding. This pattern could reflect the fact that many moves among low-income renters are forced and/or that forced mobility itself increases subsequent mobility. Our findings up to this point support the former interpretation that many moves among low-income households are forced. We now turn to matching models to test the latter interpretation: that forced moves increase subsequent mobility.

THE ESTIMATED EFFECT OF FORCED MOBILITY ON HOUSING QUALITY

Table 5 displays the results of two models estimating the effect of forced mobility on housing quality. A regression model fit on the full sample (model 1) shows that an involuntary move in year 1 significantly increases the

TABLE 5. Logistic Regression Modeling Housing Problems in Unmatched and Matched Samples

	(1)		(2)		(3)	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Forced move	.902	.404*	3.024	1.139**	2.901	1.028**
Annual household income ($10,000s)	.048	.101	−2.491	2.595	−3.861	4.399
Annual household income squared	−.002	.010	.606	.389	1.035	.940
Black renter	.611	.192**	5.483	5.470	−2.584	4.552
Hispanic renter	.284	.243	7.891	6.925	−1.676	4.604
Other race renter	.371	.384				
Less than high school	.653	.214**	−2.712	2.445	−2.115	2.900
Some college	.314	.184	2.107	1.153	2.396	2.084
Bachelor's degree or more	.054	.258				
Female renter	.410	.170*	−.916	1.333	−.768	1.380
Married	−.049	.210	−1.544	2.214		
Children in the household	−.155	.197	−1.191	2.166	−4.404	2.262
Age	−.015	.006*	−.029	.065	−.181	.120
Criminal record	.221	.209	−4.452	1.844*	−7.020	1.878***
Rental asistance	−.274	.270	−1.453	0.931	−2.761	1.421
Job loss in previous 13–24 months	.199	.239	2.789	1.479	5.237	1.241***
Breakup in previous 13–24 months	−.171	.214	.796	1.401	−.856	1.158
Tenure before move (months)	−.002	.001	.045	.023	.089	.033**
Months in current home	.032	.014*	−.245	.127	−.457	.143**
Constant	−.269	.379	−2.026	6.362	14.894	10.663
N	796		68		54	
Pseudo R^2	.050		.530		.680	
Sample L1	.982		.655		.600	

Note.—The model 1 sample uses the full sample; models 2 and 3 are fit on matched samples. Some variables were dropped from models 2 and 3 due to multicollinearity. Robust standard errors are displayed.

  * $p < .05$.

  ** $p < .01$.

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

likelihood that a renter will experience long-term housing problems such as broken appliances, exposed wires, or no heat. For ease of interpretation, we estimate the average marginal effect of forced removal on unforced mobility. To estimate an average marginal effect, the probability of experiencing housing problems is calculated twice for each respondent: once while assuming he or she has experienced a preceding forced move, and again while assuming he or she has not. The difference between these two estimates is the individual-level marginal effect of involuntary mobility on housing problems. The average marginal effect is then calculated by averaging the individual-level marginal effect across all respondents (Bartus 2005). The estimated average marginal effect here is roughly 20 percentage points. Marginal effects are additive, so interpretation of their magnitude is independent of base rates. For example, in our sample the average renter has a

50 percent chance of experiencing lasting housing problems. Our findings suggest that after experiencing a forced move, the chance that a renter will experience housing problems in the next residence increases by at least 20 percentage points to around 70 percent.

To reduce bias in the estimation of the effect of a forced move, we use data balanced with respect to forced moves. Matching creates a sample that is suited for estimating the effect of a single variable but not for simultaneously adjudicating among the importance of multiple variables (Holland 1986). Accordingly, only the forced move coefficient is substantively meaningful in models 2 and 3 of table 5. These models also document a large and significant association between forced mobility and housing problems. The marginal effects for these estimates correspond to involuntarily displaced renters being 25–35 percentage points more likely to experience long-term housing problems. When we use linear regression to estimate the association of forced moves with the number of housing problems, we find that renters whose last move was forced reported experiencing around .6 additional long-term housing problems in the last year, compared to other renters (models available upon request). Together, these findings lend support to hypothesis 3. Urban renters whose last move was forced live in lower-quality housing than urban renters whose last move was unforced.[16]

THE ESTIMATED EFFECT OF FORCED MOBILITY ON RESIDENTIAL INSTABILITY

Table 6 displays results from our regression models estimating the effect of forced mobility on subsequent unforced mobility. Model 1, a logistic regression model applied to the full sample, shows a large and strong positive association between involuntary housing loss and a subsequent unforced move. For model 1, the estimated average marginal effect of experiencing a forced move is a 14 percentage point increase in a renter's chance of experiencing an unforced move the following year. That is, while the average renter in our sample has around a 26 percent chance of moving in a given

16. Like many other American cities, Milwaukee offers little by the way of relocation assistance for the involuntarily displaced. This is particularly true for the informally evicted, who have no proof of their eviction. Unsurprisingly, then, supplemental analyses found that relying on an agency to locate housing (e.g., the Housing Authority, a community-based organization) had no effect on the association of forced moves with housing problems.

TABLE 6. Logistic Regression Modeling Unforced Mobility in Unmatched and Matched Samples

	(1)		(2)		(3)	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Forced move	1.220	.367**	2.899	1.197*	2.636	1.239*
Annual household income ($10,000s)	.048	.149	1.978	.876*	1.959	1.438
Annual household income squared	.010	.013	−.130	.075	−.147	.114
Black renter	−.242	.336	4.211	2.664	6.651	7.807
Hispanic renter	−.674	.502	11.002	5.271*		
Other race renter	.699	.622				
Less than high school	1.069	.387**	4.280	2.147*		
Some college	−.119	.346	−.371	1.656	1.825	3.781
Bachelor's degree or more	.177	.420	8.644	4.638		
Female renter	.110	.294	−7.789	3.534*	−24.739	6.029***
Married	−.030	.399	−9.734	4.090*	−7.912	6.049
Children in the household	−.378	.324	2.291	1.842	17.196	2.078***
Age	−.028	.015	−.046	.096	.119	.171
Criminal record	.532	.331	−.028	1.340	−15.743	2.229***
Rental assistance	.225	.483	.823	1.600		
Job loss in previous 13–24 months	−.825	.497	.258	.857	−2.140	2.494
Breakup in previous 13–24 months	.631	.351	.110	1.267	−1.778	1.730
Tenure before move (months)	−.029	.009**	−.182	.093*	−.161	.148
Constant	−.616	.648	−1.953	3.748	−7.880	9.113
N	679		92		39	
Pseudo R²	.189		.482		.449	
Sample L1	.967		.622		.382	

Note.—The model 1 sample uses the full sample; models 2 and 3 are fit on matched samples. Some variables were dropped from models 2 and 3 due to multicollinearity. Robust standard errors are displayed.

* *p* < .05.

** *p* < .01.

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

year, that chance increases 14 percentage points to around 40 percent after experiencing a forced move.

Two doubly robust regressions using data processed and weighted by coarsened exact matching (models 2 and 3) estimate that an involuntary move in year one increases a renter's chance of experiencing an unforced move in the following year by an average marginal effect of 23–26 percentage points.[17] These estimates are statistically significant and substantively large despite considerable conservative bias built into our estimates and the set of covariates for which we have controlled.

By indicating that renters who experienced a forced move were significantly more likely to undertake an unforced move the following year,

17. The estimated average marginal effect is dependent not just on the size of the estimated model coefficients but also on the probability that each respondent experiences housing problems. Because each model is fit on a different sample, the probabilities used in calculating the estimated average marginal effect differ across models.

compared to matched renters who avoided involuntary displacement, these results lend support to hypothesis 4. We hypothesize that one possible mechanism for this relationship has to do with housing quality: namely, that many renters who experienced an involuntary move relocated to worse housing units. Our analyses presented above support this hypothesis. But are those housing problems enough to motivate a subsequent, unforced move? To gain some purchase on this question, we examined in detail the reasons renters cited for their moves. We focused on two sorts of renters: those who voluntarily moved and then voluntarily moved again and those who involuntarily moved and then later moved by choice. In a weighted sample, we find that 53 percent of renters who experienced a forced move followed by an unforced move attributed their latest move to a desire to move to a better housing unit or neighborhood, while only 34 percent of renters with two consecutive unforced moves reported having done so for these reasons. This difference is statistically significant ($p = .04$). Unforced movers whose previous move was involuntary were far more likely to cite housing or neighborhood problems as the reason for their relocation than unforced movers whose previous move was also unforced. These descriptive findings lend support to our argument that housing problems are a mechanism that helps explain the link between involuntary displacement and residential mobility.

Subgroup analyses (not shown) suggested two important additional findings. First, our main results from the logistic regressions appear to be driven primarily by families with children. This suggests that households with children face unique obstacles when attempting to find subsequent housing after experiencing a forced move—from maximum occupancy limits and family discrimination to pressure to rehouse minors as quickly as possible—and are particularly compelled to accept substandard conditions. It further suggests that parents or caretakers feel an extra measure of urgency to move their children away from degrading and dangerous housing conditions. Second, analyses applied to a subsample of Hispanic renters find the estimated effects of involuntary mobility on our two outcomes to be substantially larger than those reported for the full sample. Perhaps owing to the condition of the housing stock in Milwaukee's predominantly Hispanic Near South Side, Hispanic renters who experience involuntary displacement appear to be more likely to relocate to substandard housing and to undertake an unforced move from those conditions soon thereafter, compared to white and black renters.

DISCUSSION

Residential stability begets a kind of psychological stability, which allows people to place an emotional investment in their home, social relationships, and community and promotes subjective well-being based on empathy and reciprocity (Evans 2004; Oishi 2010), begets school stability, which increases the chances that children will excel in their studies and graduate (Temple and Reynolds 1999), and begets community stability, which increases the chances for neighbors to form strong bonds and to invest in their block (Sampson 2012). Residential stability is crucial to the life chances of children, adults, and communities. But many low-income families enjoy little of it. When it comes to residential instability among poor households, documentation outpaces explanation. High mobility rates among low-income households largely have gone unexplained.

This study directly investigates the patterns and mechanisms of residential mobility among urban renters, among whom the majority of low-income city-dwellers count themselves. It finds, first, that involuntary displacement drives heightened mobility rates among the most financially insecure renters in Milwaukee. This finding lends support to our conceptual model postulating three archetypes of residential mobility involving the involuntarily mobile, financially insecure households who move frequently because they are forced to; the purposefully mobile, financially secure households who move frequently because they want to; and, in between, the immobile, renters who move infrequently, being neither so destitute as to regularly experience eviction nor so financially advantaged as to relocate to a nicer home or better neighborhood.[18] Our emphasis on the immobile recognizes that residential stability is not universally optimal, especially for families residing in disadvantaged neighborhoods. The lack of affordable housing not only contributes to high rates of forced displacement among the involuntarily mobile, it also prevents the immobile from leaving resource-deprived and dangerous neighborhoods (Sampson 2012; Sharkey 2013).

Once we accounted for involuntary displacement, which is overlooked in most research on residential mobility, we find that income was no longer associated with rates of mobility among urban renters. This finding is driven by two independent yet reinforcing processes. The first is that the moves of

18. Households that relocate voluntarily on average experience a significant improvement in neighborhood quality, but those that experience involuntary dislocation relocate to neighborhoods with higher poverty and crime rates (Desmond and Shollenberger 2013).

very poor renters are disproportionately forced: almost a quarter of recent moves undertaken by Milwaukee's poorest renters (with household incomes below $12,204) were involuntary dislocations. The second process has to do with heightened levels of unforced mobility that regularly follows a forced move. A forced move often compels renters to move into a subpar apartment, which in turn compels them soon thereafter to undertake an intentional move to find better housing. Our study shows that renters who recently experienced a forced move were more likely to live in lower-quality housing units than matched renters who did not; and it shows that renters who were forced from their previous dwellings had a significantly higher likelihood of undertaking an unforced move in the period following their involuntary displacement than matched renters who were not. Renters who recently experienced a forced move followed by an unforced move were much more likely to cite housing problems or neighborhood dissatisfaction as the motivation for the latter relocation than renters who recently experienced an unforced move followed by another unforced move. These findings indicate that forced relocation not only accounts for a significant portion of moves experienced by poor renters, but is itself associated with heightened residential mobility among low-income renters.

By showing that involuntary displacement is fairly common among low-income renters, this study underscores the need for policy makers to dedicate attention and resources to this issue. Policy makers should recognize the importance of informal evictions, found here to be the most common type of forced move renters experience. The findings of this study imply that any estimate of the prevalence of involuntary displacement that neglects informal evictions, be it based on administrative data (e.g., eviction records, social service files) or conventional surveys (e.g., the American Housing Survey), is a significant underestimate. Although renters who are informally evicted are denied due process, initiatives aimed at formalizing displacement may increase their hardship because, should those renters be evicted, they will be marked with a record. Policy makers should recognize the potential negative consequences of encouraging landlords or tenants to settle their disputes in civil court; and if they wish to extend eviction prevention assistance to households facing informal eviction, they should reconsider the rules of such programs, which typically require households to exhibit a court summons or other legal documentation. Perhaps most important, lawmakers should investigate how open records laws, which allow civil court files to be accessed easily, may contribute to the proliferation of informal

evictions, as many tenants may know their rights but have good reason not to assert them.

In attempting to identify the mechanisms of residential mobility among urban renters, this study identifies two previously undocumented consequences of involuntary displacement. First, we find that forced relocation is associated with increases in residential instability. Residential instability not only can adversely affect families, it can also destabilize both sending and receiving neighborhoods. Since, as we have demonstrated, a forced relocation increases the likelihood of not one but two moves, a single eviction may destabilize multiple city blocks: the street from which a family was evicted, the street to which the family then temporarily moves, and the street to which the family moves again, seeking better conditions. Forced displacement can thus contribute to what Jane Jacobs (1961, 271) calls "perpetual slums," or churning environments where people are forever on the go and nothing appears nailed down. Perpetual slums are the enemy of civic engagement, neighborly trust, and local community and are an incubator of crime (Sampson 2012). The relationship between involuntary displacement and residential instability is therefore concerning not only from the perspective of low-income renters but also from the perspective of low-income communities.

Second, we find that forced relocation increases the chances of renters relocating to low-quality housing. Housing has been shown to be a key social determinant of health (Wilkinson and Marmot 2003), and inadequate housing has a direct relationship to a myriad of acute problems, from asthma, developmental delays, and lead poisoning in children to heart disease and poor mental health in adults (Evans and Kantrowitz 2002; Shaw 2004). It can also bring about broader social ills. For example, overcrowding leaves children with limited opportunity to concentrate on homework or enjoy an uninterrupted night's sleep, which can in turn affect their school performance (Ready, Lee, and Weiner 2004). Although involuntarily displaced families often subsequently move away from the run-down units they accept after experiencing a forced move, it may take them several months to do so. It took the Hinkston family a year to move from the indecent and overcrowded apartment they accepted following their eviction. Of the households who experienced a forced move 13–24 months prior to being interviewed, 43 percent did not experience an unforced move the following year. Moreover, research has shown that even limited exposure to substandard housing conditions can have lasting effects, especially on children's health

(Morgan et al. 2004). Our findings suggest that if we wish to understand why some low-income families live in decidedly worse housing units than others and potentially suffer the consequences that come with that, a significant part of the answer may lie in the reasons they relocated in the first place.

These findings suggest that an effective way to decrease residential instability among poor families and to prevent them from moving into substandard housing would be to lower the incidence of forced displacement. Providing indigent tenants in housing court with free legal counsel is an effective way to prevent displacement. Randomized experiments (e.g., Seron et al. 2001; Greiner, Pattanayak, and Hennessy 2013) find that tenants represented by lawyers are much more likely to avoid eviction, irrespective of the merits of their case. However effective legal aid might be, this initiative would not benefit families displaced beyond the purview of the court (the informally evicted). If most evictions are attributed to nonpayment of rent, which itself is largely attributed to the extreme housing burden of poor renting households, then the most effective policy intervention aimed at decreasing involuntary displacement would involve increasing the supply of affordable housing (DiPasquale 2011). This could be accomplished by expanding opportunities for low-income home ownership, building more public housing, increasing affordable housing requirements for local developers, or encouraging landlords to offer fixed-rent, long-term leases.

When interpreting the findings of this study, it is important to note its limitations. First, because this study was restricted to renters' residential histories, we did not observe transitions into homeownership. Some higher-income renters in our sample presumably went on to become homeowners. If we were able to observe these transitions over an extended time period, we likely would have recorded lower rates of residential mobility among better-off respondents, as homeownership typically promotes residential stability.[19] Second, as noted above, we observed household income only at the time of the interview. Although our models include additional measures of socioeconomic status (e.g., education) and controls for financial shocks (e.g., job loss), our analysis would have benefited from a reliable income variable measured over the entire duration of the study period. This limita-

19. That said, Thomas Boehm and Alan Schlottmann (2004) find that low-income minority households have a higher likelihood of transitioning from first-time homeownership to renting than from renting to first-time home ownership.

tion introduces endogeneity concerns and may have led us to overestimate moves among higher-income renters if respondents relocated to achieve better wages. As displayed in table 3, only 1 percent of moves in our sample ($N = 8$) were motivated by a renter's desire to find work. Nevertheless, the constraints of the income measure remain an important limitation of our study. Third, while the unique depth of our survey instrument allowed us to identify previously unexplored relationships among forced moves, housing quality, and subsequent unforced moves in a somewhat typical American city, future research also is needed to evaluate the extent to which these findings are generalizable to settings beyond Milwaukee.

These limitations notwithstanding, this study improves our understanding of why low-income families move as often as they do and empirically documents previously overlooked consequences of forced mobility. Conceptually, the findings of this study contribute to a more comprehensive model of residential mobility and urban inequality, one that reconciles the tension between the residential attainment and instability perspectives. Our proposed model allows for multiple processes driving patterns of mobility (or immobility) depending on urban renters' financial means, stresses the importance of moderate but important variations in levels of financial security, and emphasizes the need to document critical differences in move types (especially between involuntary and purposeful relocations), since forced dislocation is a key mechanism of residential instability.

APPENDIX

TABLE A1.   Descriptive Statistics for Full, Unweighted Sample

	Mean	SD	Min	Max
Unforced move in previous 1–12 months	.259		0	1
Forced move in previous 13–24 months	.073		0	1
Housing problem	.523		0	1
Annual household income ($10,000s)	2.506	1.915	0	14
Black renter	.462		0	1
Hispanic renter	.183		0	1
Other race renter	.046		0	1
Less than high school	.213		0	1
Some college	.306		0	1
Bachelor's degree or more	.132		0	1
Female renter	.621		0	1
Married	.161		0	1
Children in the household	.695		0	1
Age	38.499	13.748	15	91
Criminal record	.174		0	1

TABLE A1 (*continued*)

	Mean	SD	Min	Max
Rental assistance	.083		0	1
Job loss in previous 13–24 months	.110		0	1
Breakup in previous 13–24 months	.121		0	1
Tenure before move (months)	52.699	67.348	0	623
Months in current home	6.505	5.635	0	12

Note.—These unweighted summary statistics should be viewed as descriptions of the analytic sample used in our models, not estimations of actual demographic and mobility patterns ($N = 1,086$).

NOTE

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