Shaken Up: Family, Residential and School Instability Among Poor Youth

(Extended Paper Abstract Proposal)

For decades, social scientists have been studying the effects of life course transitions and instability on families and youth. Changes in family structure, residential mobility, and school switching are common events of developmental interest, and a large body of interdisciplinary literature suggests that disruptions in such contexts are associated with negative behavioral and social outcomes for young people. However, the literature is limited in some important ways. First, previous studies usually include only one of these transitions at a time, although they are often connected and each disruption might matter differently for youth development. For example, while residential mobility often accompanies divorce and school mobility often accompanies residential mobility, the effects of each disruption (or their combination) on youth behavior might be very different (Gasper, DeLuca and Estacion, 2010). In addition, some research suggests that relationships with parents might act as buffers to offset the effects of moving (Hagan et al 1996; Wheaton, 1988). Research on risk and resilience implies that stability in some domains (like parents and schools) can help individuals respond to stressful situations and enhance their coping abilities (Rutter, 1987; Jarret, 1997). Youth may move, but not change schools; household rosters may change, but youth may remain in the same school or community. Unfortunately, traditional approaches prevent us from understanding which kinds of instability have the most significant impact on the developmental trajectories of young people. Previous research also tends to focus on nationally representative samples, and simply includes controls for socioeconomic status. This approach generally assumes that instabilities work and look the same way for middle class and poor families when they may not. For example, while many middle class households relocate all together and intact, low income families sometimes disperse children across the homes of many family members when resources are low and housing units are too small. In this study, we look at the combined and independent influence of family, school and mobility changes for a large sample of low income families, and explore the nature of instability among the poor.

Previous Research

Researchers have long recognized the influential role of family and home life for child and adolescent development. Beginning in the early 1990s, research began focusing on family instability as an aspect of home life that had previously been overlooked, perhaps due to the insufficient measures provided in cross-sectional data. Wu and Martinson (1993) offered early support for the hypothesis that family instability is associated with risk behaviors, specifically premarital birth. Later studies by Wu and his colleagues focused on family instability that revolved around changes to this type of family structure (Wu 1996; Wu and Thomson 2001). As researchers became increasingly aware of cohabitation among adults, the need to examine changes in cohabitation status in households as a source of family instability with the potential to affect child outcomes arose (Bumpass and Lu 2000). Using the nationally representative National Survey on Family Growth, Raley and Wildsmith (2004) measured the number of changes (entrances and exits) of mothers' partners into the household in order to demonstrate the number of family structure transitions missed when cohabitation is *not* considered. Additional studies that included cohabitation in the measure of family instability explore the relationship between family instability and a variety of child outcomes (Fomby and Cherlin 2007; Cavanaugh and Huston 2006; Hao and Xie 2002).

Although additional measures of instability or stress -- such as residential moves, school changes, changes in the family's economic circumstances, or major illnesses of family members – have been shown to be negatively associated with certain child outcomes, relatively few studies have looked at multiple measures of instability to understand how various sources of instability affect children's outcomes. Several notable exceptions include Astone and McLanahan (1994), Adam and Chase-Lansdale (2002), Gilman et al. (2003) and Ackerman et al. (1999). Astone and McLanahan (1994) looked jointly at family structure change and residential mobility to explain dropping out of high school and found that children from non-intact families moved more than children from intact families and that this difference explained the increased risk of dropping out for this population. Adam and Chase-Lansdale (2002) used two indices of family instability (number of residential moves and number of separations from maternal and paternal figures) to examine their associations to female adolescent educational and behavioral outcomes in a sample of females from three high-poverty urban neighborhoods in a Midwestern city. They found that increased instability (more moves and more separation from parent figures) predicted worse adolescent outcomes. Gilman et al (2003) looked at family disruption (defined as the separation or divorce of the child's parents) in addition to residential mobility and socio-economic status to explore their relation to depressive episodes. Ackerman et al.'s research (1999) used the most comprehensive measure of instability, combining five measures to create one single index of instability: number of residences, number of intimate adult relationships of child's caregiver, number of families child lived with, significant illnesses in child's past, and any negative events occurring in child's life in past six months. The index was then used to explore problem behaviors for children at ages 5 and 7 for a sample of primarily low-income children and families recruited from Head Start facilities.

All of the above studies of family instability and its association with child outcomes focus family structure changes on parent or parent-figures and their partners. The *instability hypothesis* posits that transitions of parent and parent-figures into households require a period of adjustment for children. This period of adjustment has the potential to be experienced as stressful by the child, creating negative consequences in cognitive and behavioral outcomes for the child. Although researchers have measured family composition change in other studies, studies to date measure this construct as changes in parental figures and parental partners. The measure should be extended to include any transitions occurring in the household, since children living in that house must adjust and adapt to any newcomer in the household, whether or not that individual is considered a parental figure or is the partner of the primary caregiver. This is an especially relevant consideration among low income families, where resources and living arrangements are more fluid (Stack, 1974).

Furthermore, although past research has combined measures of residential mobility and school mobility (Pribesh & Downey 1999; Tucker, Marx and Long 1998; Swanson & Schneider 1999), no study to date has considered the relationship between children's outcomes and the instability of family composition change, school mobility, and residential mobility. All three of these measures (family composition change, school mobility, and residential mobility) are potential sources of stress and instability in the lives of children. Our study seeks to examine how these instabilities are related to one another among the very poor, and which disruptions are the most consequential for youth outcomes. We ask:

1. How often do poor youth experience family instability? How often are the experiences of family, school and residential disruptions connected?

2. Which instabilities are the most important for predicting educational, behavior and mental health outcomes for poor youth?

3. How do disruptions in one domain (such as school) mediate the effects of disruptions in others (such as residential moves)?

DATA & METHODS

To explore our questions we use a unique data source, the interim evaluation survey from the Moving to Opportunity housing experiment. The Moving to Opportunity (MTO) experiment was a housing mobility demonstration program that operated in Baltimore, Boston, Chicago, New York City and Los Angeles between 1994 and 1998. The program was designed as a randomized experiment to see what happens when low-income families living in public housing are offered a housing voucher to move to a low-poverty neighborhood. Over the course of four years, 4,608 families volunteered and were found to be eligible for the program. Families were randomly assigned to be a part of the treatment, section 8 or control group. The treatment group was given a voucher that required that they move to a census tract with no more than 10% poverty. About half of the experimental group families actually moved with the voucher that they were offered. The section 8 group was given a voucher that could be used anywhere in the private market and the control group was not offered a housing voucher to move. In 2002, researchers conducted an interim impacts evaluation to identify the effects of the experiment. The survey instrument asked questions of the head of household and children (ages 5-19) about economic self-sufficiency, education, mental health, neighborhood quality, employment and earnings and delinquency (Orr et, al 2003). Researchers achieved an effective survey response rate of 89.5% for adults, 85.95% for the child sample (children ages 5-11) and 89.3% for the youth sample (children ages 12-19).

Unlike many studies which use the MTO data, we will not use the data to make causal claims about the effects of moving with the voucher. Instead, we take advantage of the detailed spell data on household composition, school attendance and residential location, as well as the large sample size of poor urban youth across five cities. The data also include a rich array of youth educational, social and behavioral outcomes. Although similar research has been done using nationally representative data, to our knowledge, little research has systematically explored instability in these different domains with such a large sample of low income urban families. Although the youth respondents come from five different cities they all lived for some time in public housing and come from families that meet the eligibility requirements for section 8. This homogeneity is useful in addressing concerns about "hidden bias that might accompany selection into different environments (cf. Rosenbaum 2005) and also make it more likely that youth are exchangeable." (DeLuca & Dayton 2009: 481).

Sample

The full MTO child sample consists of at least one child (ages 5-19) from each MTO household that completed a survey. When there was more than one eligible child in the household, researchers randomly selected two children from the household to survey (Orr et al 2003).[1] Sample children lived in

[1] The differing sizes of sample households meant that children from certain households had a greater likelihood of being selected. Because of this researchers applied a weight to each child based on the number of eligible children in the household

Baltimore, Boston, Chicago, New York and Los Angeles at baseline (1994-1998) and were assigned to one of the three program groups. We restrict our analyses to a subset of the child sample—the sample youth, who are defined in the MTO interim evaluation data as those children who were between the ages of 12-19 as of May 31, 2001 and filled out a youth survey (n=2,829). A total of 2,725 of the youth cases were used in these analyses.[2] Boys account for 50.8% (1,385) of our sample and the average age is 15.

Outcome Measures

Educational Progress. To measure educational attainment for these youth (12-19), we will use two dichotomous indicators. These include a measure for whether the youth has ever been held back a grade, and a measure for whether the youth is either in school or has a high school diploma or GED (reference group is dropout or not enrolled currently in school).

Problem behavior Index. We will use the 11-item index of problem behavior created for the interim evaluation survey as our measure of adolescent problem behavior. The index represents the proportion of behavior problems that the youth reported. The eleven questions used to build this index are: difficulty concentrating; cheating or lying; teasing others; disobedient at home; difficulty in getting along with other children; trouble sitting still; hot temper; would rather be alone than with others; hanging around with kids who get into trouble; disobedient at school; and trouble getting along with teachers.

Mental Health: We will use a six item psychological distress index to measure children's mental health outcomes. The psychological distress index is the fraction of the six psychological distress items that the child reported feeling at least some of the time during the past 30 days. These 6 items are: nervous; hopeless; restless or fidgety; so depressed nothing could cheer you up; everything was an effort; and worthless.

Risky behavior. We measure a youth's risky behavior using the fraction of the following four risky behaviors that youth reported ever having engaged in: alcohol use; cigarette smoking; marijuana use; and sexual intercourse.

Delinquency. This measure is an index of the fraction of the following nine delinquent behaviors that youth reported ever engaging in: carrying a hand gun; belonging to a gang; purposefully damaging or destroying property; stealing something worth less than $50; stealing something worth $50 or more; other property crimes such as fencing, receiving, possessing or selling stolen property or cheating someone by selling them something that was worthless or worth much less than what the youth said it was; attacking someone with intention of hurting them or having a situation end up in serious fight or assault; selling drugs; arrested.

Independent Variables:

Family Composition Change. We measure family composition changes using the MTO address spell file, which indicates all individuals living in the household at all points in time between baseline and the

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. For a more detailed discussion of the survey sample selection and weighting procedures, see Appendix B of the Interim Impacts Evaluations (Orr et al. 2003).

[2] The full MTO youth sample is 2,829; 104 cases were dropped for these analyses because they had no school records available.

interim evaluation. We calculate whether the child experienced a family composition change in several ways. First, we tally whether an individual ever lived in the unit with the focal child at some point since the baseline survey, but was not living with the child at baseline ("new arrivals"). We also count a family composition change when an individual who was living with the sample child at baseline left the child's household at some point between baseline and interim ("early departures"). We do not count the entrance of newborns in our calculation of family composition change and we account for all household member changes, regardless of whether the youth was related to the entering or exiting household member. This allows for the entrance and exit of the non-marital romantic partners of the youth's parent, which is a significant source of change among low income households. It also allows for the inclusion of family dynamics introduced by family friends and other kinds of extended kin.

Residential Mobility. We measure residential mobility by counting the housing changes that a child has made since baseline. Because half of the experimental group and the Section 8 group moved with a housing voucher and many other families had to move because of HOPE VI demolition, we consider a child to have experienced low mobility if they moved zero or one times between baseline and the interim evaluation. We consider children who have moved two or more times in the four to seven years since baselines to have experienced high mobility.

Non-promotional School Changes. To measure non-promotional school changes we used the MTO school history file. To construct the school history file, interviewers asked parents for the name and addresses of each school that the child had attended between baseline and the interim evaluation; parents were also asked which grades the child attended at each school (Orr et al 2003). Although the MTO interim evaluation dataset allows us to identify the number of schools a child has attended, it does not provide information about how many of these school changes were "natural" (due to promotion from elementary to middle school or middle school to high school). We used the NCES code in the school history file to identify the grade span information for each child's school provided by the Common Core of Data and Private School Survey. We merged this information with the school history file in the MTO database so that we could compare the grade that a child completed at each school with the highest grade available at the school. If a child changed schools before reaching the highest grade available at their school, we counted their change as a non-promotional school change.

Control Variables

In addition to the independent variables of interest, we include some demographic controls in our regression models. These controls include the child's age, race and gender. We also include an indicator variable noting if the youth's household was receiving Aid to Families with Dependent Children (AFDC) at baseline. Although all sample members were low-income at baseline, the differences in their socioeconomic status may explain some of the variability in the outcome measures for the youth. This AFDC indicator will capture some of this variation in SES as families needed to have extremely low or zero income to receive AFDC. Finally, we include an indicator variable of the child having exhibited problem behavior at baseline. The homogeneity of the sample (all low income minority families living in urban public housing and voluntarily signing up for a housing subsidy) ensures that the youth are more 'exchangeable' in the MTO sample than they might be within a nationally representative data set.

Analytic Plan

First, we will look at the frequency of all instabilities across youth, including household composition change, school change, and residential change. In supplemental analyses, we will use the NLSY97 to characterize patterns of mobility for a national sample of youth, and serve as a point of comparison for the high poverty MTO sample.

In addition to the descriptive data, we will employ latent class models to examine the pattern of multidimensional changes over time. The advantages of the LCM are similar to common cluster analysis approaches, in that one can construct typologies to examine the full spectrum of transition patterns in the data (McCutcheon, 1987; Vermunt, 2003). The latent class models have the advantage of using all of the information in the data to estimate class probabilities, and reduce measurement error. The LCM can be treated as either a heuristic that guides the development of instability measures or more formally as a basis for constructing a latent variable for "instability typologies" to be used in the subsequent analyses. In other words, we can use the LCM to see how we might want to construct the instability variables or use the results from these models to assign youth to different classes and then use the class indicator in the predictive models. See Appendix A for an example of latent class analysis for one wave of the MTO data. Types of classes we expect to see might include: chronic movers with other instabilities; very stable families; youth whose most frequent disruption is family level; youth who experience both school and residential change; youth for whom neighborhood change occurs, but not household disruption, etc.

Models

Our research questions move toward understanding how instability affects important indicators of youth well being and development, such as on time grade progression, high school completion, engagement in delinquent behavior, and mental health. To begin, we will use simple models to predict these outcomes with indicators for whether youth ever experienced each type of instability, starting with residential mobility to assess its independent association with each outcome and then adding each type of additional disruption (family, school) to see how or whether they can account for these relationships. We will also explore models that use dummy variables for all possible "ever" combinations (eight total, with no moves, school changes or family disruptions as reference). We will then move to models that use the measures of instability patterns as predicted by the latent class models, and see whether the results change substantively.

Preliminary Findings

To date, we have begun to construct the measures of residential mobility, school changes and family disruptions. The tables below show early descriptive analyses of total number of moves (using data from families with the least and most waves of data[3]) as well as the total number of non-promotional school changes, broken down by age. Tables 1 and 2 show that for families with 4 years of data, 44% moved two or more times, and 84% of families with 7 years of data have moved more than twice. These figures show the high levels of residential mobility among the low income MTO families (for context, 13-20% of the youth in the NLSY97 have ever moved once). Tables 3-5 also show a striking amount of

[3] Families signed up for the MTO program and moved between 1994-1998. Therefore the number of years of family data varies from as few as 4 to as many as 8.

school instability across age groups. Forty percent of 9-12 year olds have experienced one non-promotional school change and a quarter have switched schools two or more times. The numbers are similar for 13-15 year olds. These figures are two to three times the rate of nationally representative samples (Gasper, DeLuca and Estacion, 2010).

We have begun to explore changes in family composition , and will have these measures, as well as the latent class models and regressions underway this fall. We expect that our results will allow us to describe the extent and details of family, residential and school mobility among the MTO families and create latent class typologies that describe the patterns of instability among this sample and how these disruptions are related. We will predict youth educational and developmental outcomes using individual measures of each type of instability, models that include each combination of instability to assess mediating relationships, and we will use the instability 'classes' to predict these outcomes. The models that include each instability combination will allow us to examine which experiences are the most important for each outcome; the models that include instability 'classes' allow us to show how the different trajectories of instability predict youth outcomes.

Significance

By studying the interrelated nature and effects of instability on youth development from a large sample of low income families, we have the opportunity to look more closely at how these families function and what youth experience over the course of their lives. In particular, we can describe the dynamics that occur for a sample of youth whose families volunteered for a policy intervention. While we do not evaluate the intervention itself, this research can shed light on the kinds of challenges that these families face and how we might better design housing and other policies to account for these disruptions. For example, learning whether the negative effects of residential mobility can be attenuated by stability in school environment indicates that programs aimed at reducing school mobility may have positive effects on long term educational attainment (see Kerbow, 1996, 2003).

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Table 1. Number of addresses lived in by head of household within 4 years (first address spell + 4 years)

\Number of Addresses	N	Percent	Cumulative Percent
1	1,254	27.39	27.39
2	1,842	40.23	67.61
3	946	20.66	88.27
4	367	8.01	96.29
5	129	2.82	99.1
6	31	0.68	99.78
7	7	0.15	99.93
8	2	0.04	99.98
9	1	0.02	100
Total N	4,579		

Table 2. Number of addresses lived in by heads of households in 7 years who have at least 7 years of data

Number of addresses	N	Percent	Cumulative Percent
1	253	15.87	15.87
2	483	30.3	46.17
3	384	24.09	70.26
4	263	16.5	86.76
5	124	7.78	94.54
6	48	3.01	97.55
7	24	1.51	99.06
8	10	0.63	99.69
9	4	0.25	99.94
10	1	0.06	100
Total N	1,594		

Table 3. Non-Promotional School Changes,

Ages 9-12

# of Non-Promotional School Changes	Freq.	Percent	Cum.
No change	530	31.01	31.01
1 change	744	43.53	74.55
2 changes	324	18.96	93.5
3 or more changes	111	6.5	100
Total	1,709	100	

141 missing cases

Table 4. Non-Promotional School Changes,

Ages 13-15

# of Non-Promotional School Changes	Freq.	Percent	Cum.
No change	359	34	34
1 change	387	36.65	70.64
2 changes	217	20.55	91.19
3 or more changes	93	8.81	100
Total	1,056	100	

117 missing cases

Table 5. Non-Promotional School Changes,

Ages 16 & up

# of Non-Promotional School Changes		Freq.	Percent	Cum.
No change		472	41.26	41.26
1 change		420	36.71	77.97
2 changes		188	16.43	94.41
3 or more changes		64	5.59	100
Total		1,144	100	

196 missing cases

Appendix A. Latent Class Example with One Wave of MTO Data

Latent Class Probabilities for Residential, School, Neighborhood, and Family Change, Moving to Opportunity -2003.

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Residential Move				
No	0.00	1.00	1.00	0.00
Yes	1.00	0.00	0.00	1.00
Poverty of Destination Neighborhood				
Did not move	0.00	1.00	1.00	0.00
Similar Poverty	0.23	0.00	0.00	0.25
Less Poverty	0.67	0.00	0.00	0.75
Greater Poverty	0.09	0.00	0.00	0.00
School Change				
No	0.50	0.71	0.26	0.73
Yes	0.50	0.29	0.74	0.27
Family Disruption				
No	0.85	0.94	0.59	0.38
Yes	0.15	0.06	0.41	0.62
Sample Probability	0.38	0.29	0.19	0.13

Although based on only one time period, the latent class analysis of the MTO data shown in Appendix A reveals considerable heterogeneity in the nature of residential moves. For example, cluster 1 comprises 38 percent of the sample (see final row) and reveals a pattern by which residential mobility (1.0) is coupled with a high likelihood (.67) of changing neighborhoods and having the destination neighborhood have less poverty, some likelihood of changing schools (.50), but little family

disruption (.15). In contrast, cluster 4 characterizes a smaller segment of the sample (.13) and involves residential mobility (1.0) that is accompanied by a significantly greater likelihood of family disruption (.62), considerably less likelihood of changing schools (.27), yet a similarly lower level of poverty in the destination neighborhood (.75). Clusters 2 and 3 are also important in that they reveal non-mobility comparison groups, one in which a high likelihood of school change (.74) is accompanied by elevated risk of family disruption (.41) and another in which there is little evidence of any type of mobility, residence, school, or neighborhood, nor any evidence of family disruption (.06). In sum, such models provide empirically based descriptions of the different ways in which family instability is connected with residential and school instability.