

Intergenerational Consequences of Incarceration

The Intergenerational Consequences of Mass Incarceration: Implications for Children's Co-Residence and Contact with Grandparents

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In response to the rapid growth in mass incarceration, a burgeoning literature documents the mostly deleterious consequences of incarceration for individuals and families. But mass incarceration, which has profoundly altered the American kinship system, may also have implications for relationships that span across generations. In this paper, I use data from the Fragile Families and Child Wellbeing Study, a longitudinal data source uniquely situated to understand the collateral consequences of incarceration for families, to examine how paternal incarceration has altered two important aspects of intergenerational relationships: children's co-residence and contact with grandparents. Results show that the association between paternal incarceration and grandparent co-residence results from social selection forces, but that paternal incarceration—especially incarceration lasting three months or longer and incarceration for violent offenses—is associated with less contact with paternal (though not maternal) grandparents. More than one-quarter of this negative relationship is explained by separation between parents that often occurs after paternal incarceration, highlighting the potentially “kinkeeping” role of mothers and the role of fathers in structuring children's relationships with grandparents. Additionally, these negative consequences are strongest among children living with both parents prior to paternal incarceration and among children of previously incarcerated fathers. Taken together, the results provide some of the first evidence that the collateral consequences of incarceration may extend to intergenerational relationships.

The dramatic rise in mass incarceration in the United States, which began in the mid-1970s and has continued mostly unabated, means that incarceration is commonly experienced by an increasing number of individuals and families. In response, an escalating literature documents the mostly negative consequences

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for those connected to the incarcerated. Indeed, mass incarceration has deleterious implications for various aspects of family life, including romantic relationships (e.g., Massoglia, Remster, and King 2011), parenting (e.g., Turney and Wildeman 2013), social support (e.g., Turney, Schnittker, and Wildeman 2012), and child wellbeing (e.g., Wakefield and Wildeman 2013).

But mass incarceration has altered the American kinship system in ways that are only beginning to be discovered. Incarceration, similar to other demographic changes such as divorce (Cherlin and Furstenberg 1986; Spitze et al. 1994), likely has implications for relationships that extend across multiple generations. Through its attendant removal of men from households, incarceration may reorganize intergenerational relationships by altering norms and expectations about kinship functions, modifying obligations between parents and their children and grandchildren, and increasing the necessity for family support extending across multiple generations. For example, the stigma of incarceration may cause parents to withdraw economic, instrumental, or emotional support to incarcerated or formerly incarcerated adult children. Alternatively, the challenges associated with incarceration may create a context in which adult children need their parents to increase financial transfers, caregiving responsibilities, and other forms of social support.

Understanding the association between incarceration and intergenerational relationships is essential, given the increasing importance of intergenerational relationships in the United States in the twenty-first century (Bengtson 2001). The changing demography of American families is one reason why, for many families, intergenerational relationships have become more valuable (Cherlin 2009; Dunifon 2013). For example, family instability has become more common over the past half-century, and extended family members, especially grandparents, often step in to nurture and socialize children during and after periods of instability. Further, women's increased labor-force participation may facilitate parents' need for grandparents to provide child care (Bengtson 2001). For some populations, especially racial/ethnic minority and low-income populations that are disproportionately affected by incarceration, intergenerational relationships have long provided social support (Cherlin and Furstenberg 1986; Fuller-Thomson, Minkler, and Driver 1997).

Despite reasons to expect that incarceration is consequential for bonds across generations, little is known about the collateral consequences of incarceration for intergenerational relationships. In this paper, I use data from the Fragile Families and Child Wellbeing Study, a longitudinal study of children born to mostly unmarried parents between 1998 and 2000, to examine how paternal incarceration is associated with two aspects of intergenerational relationships—children's co-residence and contact with maternal and paternal grandparents—in early childhood, a life-course period when grandparents may be especially involved in caring for their grandchildren (Baydar and Brooks-Gunn 1998; Silverstein and Marengo 2001).¹ The Fragile Families data provide an excellent opportunity to examine the consequences of mass incarceration for intergenerational relationships. Importantly, these data comprise a relatively large number of incarcerated fathers who have demographic characteristics that are comparable to those of

men with young children in local jails, state prisons, and federal prisons (Turney and Wildeman 2013, 957). Additionally, these data allow for a rigorous examination of the association between paternal incarceration and intergenerational relationships, as they contain a wide array of variables associated with selection into incarceration and repeated measures of children's co-residence and contact with grandparents.

Background

Linked Lives: Paternal Incarceration and Family Relationships

The life-course perspective, which highlights the interdependence of social relationships, provides one framework for understanding how paternal incarceration alters children's co-residence and contact with grandparents. One crucial tenet of this perspective, that of linked lives, proposes that individuals live interdependently of one another (Elder 1998). In accordance with this perspective, even marginal men seemingly disconnected from families are embedded in kinship systems prior to incarceration, while behind bars, and after release. In addition to their roles as prisoners, incarcerated men are fathers, romantic partners, and sons, and their confinement is consequential for them and those connected to them.

Indeed, a burgeoning literature considers the collateral consequences of incarceration for the women and children connected to incarcerated men. The majority of incarcerated men have children (Mumola 2000), many live with their children prior to incarceration (Turney and Wildeman 2013), and even more contribute economically to their children's households (Geller, Garfinkel, and Western 2011). On balance, this research suggests that incarceration is detrimental for wellbeing among women (e.g., Comfort 2008; Turanovic, Rodriguez, and Pratt 2012) and children (Geller et al. 2012; Wakefield and Wildeman 2013) connected to the incarcerated.

Missing from this burgeoning literature, though, is a consideration of how paternal incarceration alters relationships that span multiple generations. Similar to romantic partners and children of the incarcerated, parents of incarcerated adult children confront the cycle of imprisonment and release with them. For example, parents may experience increased economic hardship resulting from their children's legal bills or their children's sudden inability to make ends meet (Green et al. 2006). Parents may also face anxiety about their children's wellbeing in prison or, upon release, may worry about surveillance by the criminal justice system and the possibility that their children may return to prison (Goffman 2009).

The relative lack of attention to the consequences of incarceration for relationships that span multiple generations is unfortunate, as intergenerational contact is consequential for all three generations. Contact with grandchildren may increase meaning and satisfaction in the lives of grandparents (Barnett et al. 2008; though see Turanovic, Rodriguez, and Pratt [2012], 931). Grandparents may also be a stabilizing force for families (though see

Chase-Lansdale, Brooks-Gunn, and Zamsky [1994]), as their presence may increase family economic resources (Bengtson and Harootyan 1994), decrease parental stress (Greenfield 2011), increase parental monitoring (Yeung, Linver, and Brooks-Gunn 2002), and increase union stability (Högnäs and Carlson 2010). Finally, grandparents may be influential in the lives of their grandchildren. Grandparents may facilitate socialization, provide emotional support, or help repair relationships with incarcerated fathers (Cherlin and Furstenberg 1986; Doyle, O'Dwyer, and Timonen 2010). Research on the effects of grandparent co-residence for child wellbeing is inconsistent (for a review, see Dunifon [2013]), with some research suggesting that grandparent co-residence is beneficial for children (e.g., DeLeire and Kalil 2002) and other research suggesting that grandparent co-residence is detrimental for children (e.g., Foster and Kalil 2007). Research on grandparent contact is equally inconclusive (Cherlin and Furstenberg 1986; Dunifon and Bajracharya 2012; also see Dunifon [2013]).

Paternal Incarceration and Intergenerational Relationships

Paternal incarceration may have detrimental or enhancing implications for intergenerational relationships. Both the broader literature on the collateral consequences of incarceration and the literature on the intergenerational consequences of divorce provide guidance to understand how incarceration affects intergenerational relationships (and, specifically, children's co-residence and contact with grandparents). Though certainly distinctive, there are important parallels between incarceration and divorce. Most importantly, both necessitate a reorganization and renegotiation of family relationships, as both involve the removal of a parent—most often a father—from children's households. In addition, families enduring divorce and incarceration often experience resultant consequences, including increased economic hardship, greater parenting responsibilities, and increased stress (Amato 2010; Wildeman and Muller 2012).²

With respect to incarceration, the reorganization of family life may have several forms. For example, incarcerated fathers are placed in a liminal state, where they are simultaneously members of families and separated from their families. Incarcerated fathers relinquish control over when they see their young children and, accordingly, must rely on their kin (e.g., romantic partners, parents) to bring children for visitation. Upon release, fathers may experience challenges reintegrating into their children's lives, especially if mothers and children have moved on, as they often do (Turney and Wildeman 2013). Further, mothers who share children with incarcerated men lose the financial or instrumental (e.g., child care, housework) support the father once provided, which may increase their labor-force participation and their need for social support. Children's grandparents, who are likely negotiating their own complex relationships with their adult children, may increase economic and emotional support to grandchildren both during and after incarceration.

Decreased intergenerational co-residence and contact On the one hand, paternal incarceration may impede co-residence and contact between young children and their maternal and paternal grandparents. For one, incarceration is

accompanied by stigma (Braman 2004). This stigma may cause the incarcerated and those who share children with them to withdraw from relationships with their parents. Additionally or alternatively, this stigma may spill over to the parents and in-laws of incarcerated men, and this oldest generation may withdraw from their children and grandchildren. Parents and in-laws may feel disappointment, confusion, and shame resulting from their children's or children-in-law's behaviors, though this may be especially true for parents of the incarcerated (Kalmijn and de Graaf 2012; for earlier research on shame associated with divorce, see Cooney and Uhlenberg [1990]; Johnson [1988]).

In addition, research on the intergenerational consequences of divorce suggests that incarceration may decrease intergenerational contact. The reorganization of family roles after divorce—especially the removal of one parent from the household—leads to less intergenerational exchange, including amount of contact, quality of relationships between parents and adult children, and exchanges of instrumental support (Cherlin and Furstenberg 1986; Cooney and Uhlenberg 1990; Furstenberg, Hoffman, and Shrestha 1995; though see Sarkisian and Gerstel [2008]). The strained relationship quality between parents and adult children may have implications for young children's contact with grandparents because this intergenerational relationship is often contingent on the middle generation (Uhlenberg and Hammill 1998). Given that incarceration, like divorce, involves a reorganization of family roles, it is likely that paternal incarceration also strains relationships between adult children and their parents and, accordingly, decreases contact between grandparents and grandchildren.

The decrease in intergenerational contact may be especially strong among children's paternal grandparents. Children of incarcerated fathers most often live with their mothers, and these mothers may be less invested in maintaining children's relationships with their paternal, compared to their maternal, grandparents. Similar to divorce (e.g., Cherlin 1978), there are no guidelines for maintaining contact with in-laws after paternal incarceration. Indeed, research on the intergenerational consequences of divorce shows that divorce decreases children's contact with the family of their nonresident parent (most often, their father) (Ahrns 2007; Cherlin and Furstenberg 1986). This may be especially true for young children, who rely on their parents to facilitate interactions with grandparents. Furthermore, intergenerational contact is likely more variable among paternal grandparents than maternal grandparents (Mueller and Elder 2003).

Increased intergenerational co-residence and contact On the other hand, paternal incarceration may increase co-residence and contact between children and their maternal and paternal grandparents. Incarceration is a stressor to the family system. Men have few prospects for earning income while incarcerated and, upon release, the stigma and discrimination associated with a criminal record hinder their ability to garner employment (Western 2006). Incarcerated men and their romantic partners also experience attendant mental health consequences of incarceration (Turney, Wildeman, and Schnittker 2012; Wildeman, Schnittker, and Turney 2012). In response to the stress associated with incarceration, grandparents may increase the economic and emotional support to their children and grandchildren (Stack 1974; Turanovic, Rodriguez, and Pratt

2012). Grandparents may move into their adult children's households, open their households to their adult children and grandchildren, or simply visit their grandchildren more often (Green et al. 2006; Turanovic, Rodriguez, and Pratt 2012). Grandparents may also strengthen contact to compensate for fathers' decreased engagement with children (Turney and Wildeman 2013).

Research on the intergenerational consequences of divorce may again provide guidance. Some research shows that divorce may bring together mothers and their parents (Ahrons and Bowman 1982), and it is possible that the incarceration of a partner would provide a similar connection between the two. Additionally, the research that shows divorce decreases contact with parents of the non-custodial parent also shows that divorce *increases* contact with parents of the custodial parent (Cherlin and Furstenberg 1986; Johnson 1988; also see Spitze et al. [1994]). Other research finds that mothers feel obligated to provide assistance to their adult divorced children (Coleman, Ganong, and Cable 1997), and the same processes may operate with respect to incarceration. Though the evidence from the divorce literature about contact with paternal grandparents, on balance, suggests negative consequences, it is possible that mothers left behind do not want their children to lose touch with their paternal grandparents (Ambert 1988).

No change in intergenerational co-residence and contact Another possibility is that there is no association between paternal incarceration and intergenerational relationships. Men who experience incarceration, compared to their counterparts, are likely to be minorities, have low educational attainment, grow up in single-parent families, and engage in violent and other antisocial behaviors (Gottfredson and Hirschi 1990; Wakefield and Uggen 2010). Relatedly, given these disadvantages, children of incarcerated fathers may have little contact with grandparents, especially paternal grandparents, prior to paternal incarceration. Grandparents, for example, may withdraw from families due to fathers' violent behaviors.

Given the nonrandom selection into incarceration, and the stark differences between fathers who are and are not incarcerated, it may be that these pre-incarceration characteristics—and not the incarceration itself—alter intergenerational relationships (Sampson 2011). Therefore, any investigation of this relationship must carefully account for such social selection possibilities by adjusting for a host of pre-incarceration demographic (e.g., race, number of children), socioeconomic (e.g., employment, education), and behavioral characteristics (e.g., depression, substance use, impulsivity). The analyses also control for other factors associated with incarceration and intergenerational relationships such as children's age, children's birth weight (a marker of children's health and an additional measure of socioeconomic disadvantage), and mothers' and fathers' relationships with their parents, all measured prior to paternal incarceration.

Variation in the Association between Paternal Incarceration and Intergenerational Relationships

The life-course perspective also highlights the heterogeneity in social relationships. Accordingly, paternal incarceration may decrease grandparental

co-residence and contact among some families while simultaneously increasing (or not altering) grandparental co-residence and contact among other families. For one, the association between incarceration and intergenerational relationships may vary by the parents' residential status prior to incarceration. The consequences of incarceration, especially for relationships with paternal grandparents, are likely strongest when children are living with fathers prior to paternal incarceration, as it is among this group that incarceration most substantially leads to a renegotiation of family roles. These fathers (and, presumably, their parents) are more involved in their children's lives than non-residential fathers (Turney and Wildeman 2013). Children with non-residential fathers have less contact with grandparents (Cherlin and Furstenberg 1986), especially paternal grandparents, and thus incarceration may scarcely alter these relationships.

Additionally, the association between paternal incarceration and intergenerational relationships may vary by fathers' history of incarceration, though the direction of influence is unresolved. On the one hand, paternal incarceration may be most consequential for children's relationships with grandparents the first time a father is incarcerated. A first-time incarceration may be a shock to those connected to the father, and families unprepared for the father's incarceration stint may have a more difficult time negotiating family relationships. On the other hand, if incarceration is stigmatizing and disruptive for family relationships, the accumulation of disadvantage associated with multiple incarcerations may be especially detrimental for children's relationships with grandparents. Though little existing research differentiates between the consequences of first- and higher-order incarcerations, limited evidence shows that cycling through prisons and jails is more detrimental to family life than a single incarceration (Braman 2004, 59; Wildeman 2010, 301).

Data, Measures, and Analytic Strategy

Data

To estimate the relationship between paternal incarceration and children's co-residence and contact with grandparents, I use data from the Fragile Families and Child Wellbeing Study. The Fragile Families Study is a longitudinal survey of nearly 5,000 mostly unmarried parents who gave birth in urban areas between 1998 and 2000. See Reichman et al. (2001) for more details about the study design. Mothers were interviewed in the hospital after their child's birth, and again by telephone when their child was one, three, five, and nine years old. Fathers were also interviewed at all waves. Response rates were relatively high among mothers, as 89, 86, 85, and 76 percent of the baseline sample completed the one-, three-, five-, and nine-year surveys, respectively. Given that the key explanatory variable, recent paternal incarceration, is measured most accurately between the three- and five-year surveys (for details, see below), I use data from the first four waves of data collection.

The main analytic sample—used to estimate co-residence with maternal grandparents, co-residence with paternal grandparents, and contact with

maternal grandparents—includes 3,494 observations. I delete observations in which the mother did not participate in the three- or five-year surveys ($n = 1,051$). I delete 57 additional observations in which the father is deceased and 40 additional observations in which the child does not live with the mother. Finally, I delete observations missing the key dependent variables ($n = 256$). A second analytic sample—used to estimate children’s contact with paternal grandparents—includes 2,604 observations. This analytic sample is similar to the first analytic sample but instead deletes observations missing information on co-residence with paternal grandparents ($n = 1,146$). More observations are missing data about children’s contact with paternal grandparents, compared to contact with maternal grandparents, because mothers were asked this question only if they had any (romantic or non-romantic) relationship with the child’s father (discussed below). Importantly, estimates of children’s co-residence with maternal and paternal grandparents and contact with maternal grandparents using the smaller sample produce similar conclusions (also discussed below).

There are few statistically significant observed differences between the first analytic sample and the baseline sample. Mothers in the first analytic sample are younger, less likely to be born outside the United States, and more likely to have education beyond high school ($p < .05$). Given that parents not in any relationship are dropped from the second analytic sample, there are more differences between the second analytic sample and the baseline sample, with the analytic sample generally more advantaged than the baseline sample. For example, mothers in the second analytic sample are more likely to be non-Hispanic White, more likely to live with both biological parents at age 15, more likely to have education beyond high school, less likely to experience incarceration, and more likely to be living with the child’s father at the three-year survey. They also have higher income-to-poverty ratios ($p < .05$).

In both analytic samples, the vast majority of variables (exceptions include fathers’ relationship with his parents and fathers’ impulsivity) are missing data for fewer than 2 percent of observations. I preserve missing covariates by producing 20 multiply imputed data sets with Stata’s MI commands (multivariate normal method). The imputation model for both analytic samples includes all independent and dependent variables, though I did not impute the dependent variables (Allison 2001). Sensitivity analyses using listwise deletion and multiple imputation with chained equations provide robust results. Multivariate analyses are averaged across data sets.

Measures

Dependent variables The four dependent variables include children’s co-residence and contact with maternal and paternal grandparents, measured at the five-year survey. First, dummy variables indicate that the child is residing with a maternal grandparent and the child is residing with a paternal grandparent.

Next, mothers were asked how often the child sees his/her maternal grandparents (1 = *never*, 2 = *less often than a few times a year*, 3 = *a few times a year*, 4 = *a few times a month*, 5 = *once a week or more*). Mothers are not asked this

question if both grandparents are deceased and, if only one grandparent is living, are instructed to respond for the living grandparent.³ If the child sees one maternal grandparent more than the other, mothers are instructed to respond with respect to the grandparent seen most frequently.

Mothers were also asked how often the child sees his/her paternal grandparents. Again, mothers are instructed to respond for the living grandparent and the one seen most frequently. Importantly, mothers are not asked to report on the frequency of paternal grandparent contact if the mother and father are not in any kind of (romantic or non-romantic) relationship ($n = 793$). Parents are considered in a relationship if the mother reports that the couple is married, romantically involved, separated, divorced, or just friends. Parents not in a relationship are likely couples not in a romantic relationship who do not maintain a friendship with each other, and descriptive statistics show that these mothers are likely to have repartnered (59 percent at the five-year survey), have children with other partners (64 percent), and report low father engagement (1.31 days per week).

Explanatory variable Recent paternal incarceration is the key explanatory variable. Fathers are considered recently incarcerated if they spent time in prison or jail between the three- and five-year surveys or were incarcerated at the five-year survey. Both mothers and fathers were asked about fathers' incarceration, and fathers are considered recently incarcerated if either parent responded affirmatively (or if the father was interviewed in prison or jail), as prior research suggests this strategy produces the least biased estimates (Geller et al. 2012). The data include some more nuanced information about incarceration experiences (85 percent have information on incarceration duration, and 66 percent have information on incarceration offense type), and supplemental analyses considering duration and offense type are discussed below.

As noted above, the key explanatory variable, recent paternal incarceration, is measured between the three- and five-year surveys because it is most accurately measured during this time period. Between the baseline- and one-year surveys and between the one- and three-year surveys, it is only possible to construct a measure that indicates the father was currently incarcerated or experienced his first lifetime incarceration. Current incarceration is a precise measure, but is limited because a relatively small percentage of fathers were incarcerated at the time of the one- or three-year surveys (5 and 7 percent of the analytic sample, respectively). First-time incarceration is highly imprecise, as the comparison group includes individuals who were not incarcerated *and* those who experienced a higher-order incarceration, and, accordingly, is not an appropriate explanatory variable.

Additional covariates The multivariate analyses control for demographic, socioeconomic, and behavioral characteristics associated with paternal incarceration and children's contact with grandparents, all measured at or before the three-year survey (and, accordingly, prior to recent paternal incarceration). Maternal demographic characteristics include the following: race, mixed-race relationship with child's father, foreign-born, age, lived with both biological parents at age 15, living with the child's father, new romantic partner, and number of children in the household. The analyses also adjust for mothers' and fathers'

multi-partnered fertility. Maternal socioeconomic characteristics include the following: employed in the last week, educational attainment, and income-to-poverty ratio (based on household size and composition). Maternal behavioral characteristics include depression (measured with the Composite International Diagnostic Interview Short Form [CIDI-SF]), fair or poor overall health, binge drinking or illicit drug use, and incarceration since the child's birth. Two continuous variables indicate how well each parent gets along with his/her parents (1 = *not very well or no contact*, 2 = *somewhat well*, 3 = *very well*) at the one-year survey. Child characteristics include gender, age (in months), low birth weight, and temperament. Father characteristics include engagement with child (e.g., how often fathers sing songs or nursery rhymes with child; 0 = *0 days per week* to 7 = *7 days per week*), shared responsibility in parenting (e.g., how often the father runs errands like picking things up from the store; 1 = *never* to 4 = *often*), and cooperation in parenting (e.g., father supports you in the way you want to raise child; 1 = *never* to 4 = *always*). Children's mothers report on these three indicators of parenting. Finally, the analyses adjust for paternal characteristics that might be associated with selection into incarceration, including substance abuse, domestic violence, impulsivity, and prior incarceration. Some analyses include a lagged measure of children's co-residence and contact with maternal and paternal grandparents (measured at the three-year survey).

Analytic Strategy

The analyses proceed in three stages. In the first analytic stage, logistic regression models estimate children's co-residence with maternal and paternal grandparents (table 2) and ordinary least squares (OLS) regression models estimate children's contact with maternal and paternal grandparents (table 3), both as a function of recent paternal incarceration. In both tables, model 1 includes the key explanatory variable, recent paternal incarceration, as well as an array of demographic, socioeconomic, behavioral, and child covariates. I add four paternal characteristics associated with selection into incarceration, including substance abuse, domestic violence, impulsivity, and prior incarceration (model 2) and a lagged measure of the dependent variable (model 3). Because children's contact with grandparents may be especially contingent on co-residence with these grandparents, I restrict some analyses to children not co-residing with (maternal or paternal, depending on the outcome) grandparents (model 4).

The first three models of table 2 and the first five models of table 3 control for an array of parental characteristics associated with selection into incarceration, though the analyses do not control for unobserved characteristics. Thus, in the final models (model 4 in table 2 and model 5 in table 3), I present coefficients from within-person fixed-effects models that estimate how entry into recent incarceration ($n = 352$ and 209 for models estimating children's contact with maternal and paternal grandparents, respectively) is associated with changes in children's contact with grandparents between the three- and five-year surveys. These models adjust for unobserved stable characteristics (i.e., propensity for criminal activity) and observed time-varying characteristics of individuals.

Previewing the results from the first analytic stage, I find that recent paternal incarceration is not robustly associated with children's co-residence with maternal grandparents, co-residence with paternal grandparents, or contact with maternal grandparents, but is negatively associated with children's contact with paternal grandparents. Therefore, in the second analytic stage (table 4), I examine two variables that might explain this association: (1) changes in the relationship between the child's parents; and (2) changes in the relationship between the father and his parents. Importantly, it is not possible to establish proper time-ordering between recent paternal incarceration and these possible explanations (i.e., it is not clear whether incarceration preceded or followed these changes in relationships) and, accordingly, these results are considered preliminary. I include these analyses because of their theoretical relevance and to stimulate future research on this topic. Finally, in the third analytic stage (table 5), I consider how the association between recent paternal incarceration and children's contact with paternal grandparents varies by two pre-incarceration characteristics: father's pre-incarceration residential status and father's prior incarceration. All models include city fixed effects to account for the clustering of observations within cities.

Sample Description

Descriptive statistics for all variables are presented in table 1, first for the entire sample and then by recent paternal incarceration. The mean for children's contact with maternal grandparents at age five is 4.177, which is slightly higher than the "few times a week" category. The mean for children's contact with paternal grandparents at age five is 3.570, which is about halfway between the "few times a month" and the "few times a week" categories. About 18 percent of fathers ($n = 638$) were incarcerated between the three- and five-year surveys. The sample is relatively disadvantaged across a wide range of demographic, socioeconomic, and behavioral characteristics. About three-quarters (78 percent) of mothers are racial/ethnic minorities, and about 15 percent were born outside the United States. More than half (52 percent) were living with the child's father at the three-year survey. Also, at the three-year survey, more than half (52 percent) had no education beyond high school and only 57 percent reported employment in the past week. About 20 percent of mothers report depression, 13 percent are in fair or poor health, 10 percent engage in binge drinking or illicit drug use, and 6 percent have been incarcerated at some point between the baseline and three-year surveys.

The descriptive statistics for the entire sample, though, mask variation by recent paternal incarceration. Children of recently incarcerated fathers, compared to children of not recently incarcerated fathers, are more likely to live with their maternal grandparents (18 percent compared to 10 percent, $p < .001$). Very few children—regardless of fathers' recent incarceration—live with paternal grandparents, and this is slightly less common among children with recently incarcerated fathers compared to their counterparts. Additionally, children of recently incarcerated fathers are more likely to see their maternal grandparents

Table 1. Descriptive Statistics of Variables Used in Analyses

	Full sample (N = 3,494)		Recent paternal incarceration (N = 638)		No recent paternal incarceration (N = 2,856)	
	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Child co-residence with maternal grandparents (y5)	0.114		0.180		0.100	***
Child co-residence with paternal grandparents (y5)	0.012		0.003		0.014	*
Child contact with maternal grandparents (range: 1–5; y5)	4.177	(1.195)	4.403	(1.057)	4.126	(1.218) ***
Child contact with paternal grandparents (range: 1–5; y5)	3.570	(1.287)	3.410	(1.375)	3.597	(1.270) **
Father recent paternal incarceration (y5)	0.183		1.000		0.000	***
Mother race/ethnicity (b)						***
Non-Hispanic White	0.222		0.143		0.240	
Non-Hispanic Black	0.479		0.636		0.444	
Hispanic	0.263		0.196		0.278	
Non-Hispanic other race	0.036		0.025		0.039	
Mother foreign-born (b)	0.149		0.052		0.170	***
Mother and father a mixed-race couple	0.140		0.165		0.134	*
Mother age (y3)	27.933	(5.913)	25.367	(4.803)	28.506	(5.986) ***
Mother lived with both biological parents at age 15 (b)	0.440		0.293		0.473	***
Mother co-residential with father (y3)	0.524		0.255		0.584	***

Mother has repartnered (y3)	0.185	0.296	0.160	***
Mother number of children in household (y3)	2.271	2.363	2.251	(1.286) *
Mother multi-partnered fertility (y3)	0.408	0.528	0.381	***
Father multi-partnered fertility (y3)	0.428	0.580	0.394	***
Mother employed (y3)	0.574	0.556	0.578	
Mother education (y3)				***
Less than high school	0.272	0.361	0.253	
High school diploma or GED	0.249	0.260	0.246	
Post-secondary education	0.479	0.379	0.501	
Mother income-to-poverty ratio (y3)	1.978	1.134	2.166	(2.444) **
Mother depression (y3)	0.204	0.290	0.185	***
Mother fair or poor health (y3)	0.126	0.152	0.120	*
Mother engaged in binge drinking or illicit drug use (y3)	0.100	0.155	0.088	***
Mother ever incarcerated (b, y1, y3)	0.056	0.105	0.044	***
Mother relationship with parents (range: 1-3; y1)	2.531	2.430	2.554	(0.598) ***
Father relationship with parents (range: 1-3; y1)	2.431	2.343	2.450	(0.623) ***
Child is male (b)	0.525	0.580	0.513	**
Child age in months (y5)	61.703	62.030	61.631	(2.777) **
Child born low birth weight (b)	0.090	0.105	0.086	
Child temperament (range: 1-5; y1)	3.410	3.308	3.433	(0.755) ***
Father engagement (range: 0-7; y3)	2.808	1.979	2.993	(2.074) ***

(Continued)

Table 1. continued

	Full sample (N = 3,494)		Recent paternal incarceration (N = 638)		No recent paternal incarceration (N = 2,856)	
	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Father cooperation in parenting (range: 1–4; y3)	3.215	(0.997)	2.779	(1.092)	3.313	(0.947)
Father abused substances (y3)	0.168		0.354		0.127	
Father engaged in domestic violence (y3)	0.126		0.255		0.097	
Father impulsivity (range: 1–4; y1)	2.021	(0.665)	2.262	(0.716)	1.967	(0.641)
Father prior incarceration (b, y1, y3)	0.414		0.839		0.319	
Child co-residence with maternal grandparents (y3)	0.134		0.187		0.123	
Child co-residence with paternal grandparents (y3)	0.017		0.008		0.019	
Child contact with maternal grandparents (range: 1–5; y3)	4.372	(0.966)	4.565	(0.824)	4.328	(0.990)
Child contact with paternal grandparents (range: 1–5; y3)	3.924	(1.069)	3.967	(1.020)	3.917	(1.077)
Mother and father separated (y5)	0.508		0.828		0.436	
Change in father's relationship with parents (y5–y1)	0.237	(0.650)	0.290	(0.659)	0.225	(0.646)

Note: b = measured at baseline interview; y1 = measured at one-year telephone interview; y3 = measured at three-year telephone interview; y5 = measured at five-year telephone interview. Number of observations for child's contact with paternal grandparents is smaller (N = 2,604 for full sample; N = 376 for recently incarcerated fathers; N = 2,228 for not recently incarcerated fathers). Asterisks indicate statistically significant differences (based on chi-square tests or t-tests) between mothers who share children with recently incarcerated fathers and mothers who do not share children with recently incarcerated fathers. Recent paternal incarceration indicates the father spent time in prison or jail between the three- and five-year interviews (including the five-year interview).

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

(4.403, compared to 4.126, $p < .001$) and less likely to see their paternal grandparents (3.410, compared to 3.597, $p < .01$).

In addition, there are statistically significant differences across nearly all characteristics considered. Mothers who share children with recently incarcerated men, compared to mothers not attached to recently incarcerated men, are more likely to be racial/ethnic minorities and have lower educational attainment. These mothers are also more likely to report depression, fair or poor health, binge drinking or illicit drug use, and incarceration. Similarly, recently incarcerated fathers, compared to their counterparts, engage in more antisocial behaviors, such as domestic violence and substance abuse.

Results

Estimating Children's Co-Residence with Maternal and Paternal Grandparents

Table 2 presents logistic regression models that estimate children's co-residence with maternal grandparents (panel A) and paternal grandparents (panel B) as a function of recent paternal incarceration. I turn first to panel A. The descriptive differences in co-residence with maternal grandparents by recent paternal incarceration persist when adjusting for demographic, socioeconomic, behavioral, and child characteristics (model 1; $b = 0.347$, $p < .01$), when also adjusting for characteristics associated with selection into incarceration (model 2; $b = 0.334$, $p < .05$), and when further adjusting for a lagged dependent variable (model 3; $b = 0.386$, $p < .05$). In model 3, children with a recently incarcerated father, compared to their counterparts without a recently incarcerated father, have 1.47 times the odds of co-residing with a maternal grandparent. However, these associations fall from statistical significance in the fixed-effects models (model 4; $b = 0.187$, n.s.), suggesting that stable unobserved characteristics explain this association.

Panel B present estimates of children's co-residence with paternal grandparents. Recall that the descriptive differences showed that children of recently incarcerated fathers were slightly less likely to live with paternal grandparents than their counterparts without recently incarcerated fathers. In model 1, which adjusts for an array of individual-level differences, the association remains negative but is statistically insignificant. These negative, statistically insignificant findings persist in models 2 through 4.

Estimating Children's Contact with Maternal and Paternal Grandparents

Table 3 presents OLS regression models that estimate children's contact with maternal grandparents (panel A) and paternal grandparents (panel B). Turning first to panel A, the descriptive differences in children's contact with maternal grandparents by recent paternal incarceration fall to statistical insignificance with the inclusion of demographic, socioeconomic, behavioral, and child covariates. In model 1, which adjusts for these factors, there is no statistically significant association between recent paternal incarceration and children's contact

Table 2. Logistic Regression Models Estimating Children's Co-Residence with Grandparents as a Function of Recent Paternal Incarceration

	Model 1 + Limited controls	Model 2 + Extensive controls	Model 3 + Lagged DV	Model 4 Fixed effects
Panel A. Estimating children's co-residence with maternal grandparents				
Recent paternal incarceration	0.347 (0.132)**	0.334 (0.142)*	0.386 (0.157)*	0.187 (0.255)
Constant	0.353	0.208	-2.033	-
Log likelihood	-1,161	-1,158	-978	-236
Observations	3,494	3,494	3,494	408
Person-year observations	-	-	-	816
Panel B. Estimating children's co-residence with paternal grandparents				
Recent paternal incarceration	-0.625 (0.764)	-0.578 (0.788)	-0.747 (0.817)	1.304 (1.434)
Constant	-3.714	-3.251	-2.161	-
Log likelihood	-183	-179	-159	-39
Observations	3,494	3,494	3,494	72
Person-year observations	-	-	-	144

Note: Model 1 includes mother's and father's race, mother's immigrant status, mother's age, mother's family background (lived with both parents at age 15), mother's and father's co-residence, mother's repartnering, mother's number of children in household, mother's multi-partnered fertility, father's multi-partnered fertility, mother's employment, mother's education, mother's income-to-poverty ratio, mother's depression, mother's fair or poor health, mother's substance abuse, mother's incarceration, mother's relationship with her parents (and, in models estimating co-residence with paternal grandparents, father's relationship with his parents), father's engagement, father's shared responsibility in parenting, father's cooperation in parenting, child's gender, child's age, child's low birth weight status, and child's temperament. Model 2 includes all variables from model 1 and the following: father's substance abuse, father's domestic violence, father's impulsivity, and father's prior incarceration. Model 3 includes all variables from model 2 and a lagged dependent variable. Model 4 includes all time-varying control variables. Models 1 through 3 include city fixed effects. Standard errors in parentheses.

* $p < .05$ ** $p < .01$

Table 3. OLS Regression Models Estimating Children's Contact with Grandparents as a Function of Recent Paternal Incarceration

	Model 1	Model 2	Model 3	Model 4	Model 5
	+ Limited controls + Extensive controls		+ Lagged DV	Not co-residing with grandparent	Fixed effects
Panel A. Estimating children's contact with maternal grandparents					
Recent paternal incarceration	0.020 (0.050)	0.003 (0.053)	-0.007 (0.046)	0.012 (0.052)	0.043 (0.045)
Constant	4.048	3.855	0.589	0.218	6.487
Adjusted R-squared	0.177	0.213	0.412	0.400	0.591
Observations	3,494	3,494	3,494	3,094	3,494
Person-year observations	-	-	-	-	6,988
Panel B. Estimating children's contact with paternal grandparents					
Recent paternal incarceration	-0.136 (0.068)*	-0.151 (0.077)*	-0.185 (0.068)**	-0.186 (0.068)**	-0.200 (0.068)**
Constant	4.254	4.258	1.186	1.119	7.276
Adjusted R-squared	0.135	0.135	0.312	0.306	0.527
Observations	2,604	2,604	2,604	2,562	2,604
Person-year observations	-	-	-	-	5,208

Note: Model 1 includes mother's and father's race, mother's immigrant status, mother's age, mother's family background (lived with both parents at age 15), mother's and father's co-residence, mother's repartnering, mother's number of children in household, mother's multi-partnered fertility, father's multi-partnered fertility, mother's employment, mother's education, mother's income-to-poverty ratio, mother's depression, mother's fair or poor health, mother's substance abuse, mother's incarceration, mother's relationship with her parents (and, in models estimating co-residence with paternal grandparents, father's relationship with his parents), co-residence with grandparents, father's engagement, father's shared responsibility in parenting, father's cooperation in parenting, child's gender, child's age, child's low birth weight status, and child's temperament. Model 2 includes all variables from model 1 and the following: father's substance abuse, father's domestic violence, father's impulsivity, and father's prior incarceration. Model 3 includes all variables from model 2 and a lagged dependent variable. Model 4 restricts the sample to those not co-residing with a maternal grandparent (in estimates of children's contact with maternal grandparents) and those not co-residing with a paternal grandparent (in estimates of children's contact with paternal grandparents). Model 5 includes all time-varying control variables. Models 1 through 4 include city fixed effects. Standard errors in parentheses. * $p < .05$ ** $p < .01$

with maternal grandparents. In fact, the coefficient for recent paternal incarceration is virtually zero ($b = 0.020$, n.s.). The statistically insignificant relationship between recent paternal incarceration and children's contact with maternal grandparents remains with the inclusion of additional controls (model 2), the inclusion of a lagged dependent variable (model 3), when restricting the sample to children not co-residing with maternal grandparents (model 4), and in the fixed-effects model (model 5).⁴

Panel B estimates children's contact with paternal grandparents. In model 1, recent paternal incarceration is associated with less contact with paternal grandparents ($b = -0.136$, $p < .05$). The magnitude of the association remains similar when additional paternal characteristics are included in model 2 ($b = -0.151$, $p < .05$) and when a lagged dependent variable is included in model 3 ($b = -0.185$, $p < .01$). Model 4, which considers only children not living with paternal grandparents, shows a statistically significant negative association ($b = -0.186$, $p < .01$). In model 5, the most rigorous model that takes into account unobserved time-invariant characteristics of individuals, recent paternal incarceration continues to be negatively associated with paternal grandparents ($b = -0.200$, $p < .01$). In this final model, recent paternal incarceration is one of the few characteristics associated with children's contact with paternal grandparents. In fact, the coefficient for recent paternal incarceration is larger in magnitude than that for co-residence with the father (and the standardized coefficients are statistically different from one another, $p < .001$). These models, similar to models estimating contact with maternal grandparents, explain a large portion of variation in the dependent variable, and the covariates work as expected.

Supplemental analyses The measures of children's contact with grandparents are not normally distributed (for example, about 10 percent of children never saw paternal grandparents, 11 percent of children saw them less often than a few times a year, 23 percent a few times a year, 26 percent a few times a month, and 31 percent once a week or more) and, therefore, violate the assumptions of OLS regression models. The analyses presented above use OLS regression models both for ease of interpretation and because the estimates can be compared to estimates from fixed-effects models (as there is no agreed-upon way to estimate fixed-effects ordered logistic regression models; see Hole, Dickerson, and Munford [2011]). But in supplemental analyses, I estimate the relationship between parental incarceration and children's contact with maternal and paternal grandparents with ordered logistic regression models and logistic regression models. These specifications produce substantively similar results.⁵

Additional supplemental analyses consider how incarceration duration and incarceration offense type are related to children's contact with grandparents. Incarceration duration is measured with four mutually exclusive dummy variables: less than three months (5 percent), three months or greater (7 percent), missing duration (2 percent), and no incarceration (86 percent). Incarceration duration or incarceration offense type is not differentially associated with children's contact with maternal grandparents, but some differences emerge with respect to children's contact with paternal grandparents. In the equivalent of

model 3, incarceration lasting less than three months, compared to no incarceration, is not associated with children's contact with paternal grandparents ($b = -0.021$, n.s.), but incarceration lasting three months or greater is negatively associated with contact ($b = -0.304$, $p < .01$), and these coefficients are statistically different from each other ($p < .05$). Incarceration offense type is also measured with four mutually exclusive dummy variables: violent offense (3 percent), nonviolent offense (6 percent), missing offense type (5 percent), and no incarceration (86 percent). Results show that violent offenses ($b = -0.537$, $p < .001$), but not nonviolent offenses ($b = -0.005$, n.s.), are negatively associated with children's contact with paternal grandparents (compared to no incarceration). The violent offense and nonviolent offense coefficients are statistically different from each other ($p < .001$).

Finally, it is possible that current paternal incarceration is differentially associated with children's contact with grandparents than recent paternal incarceration, and I consider this possibility in supplemental analyses. In the equivalent of model 3, neither current incarceration ($b = -0.046$, n.s.) nor recent incarceration ($b = 0.019$, n.s.) is associated with children's contact with maternal grandparents, and both current incarceration ($b = -0.364$, $p < .01$) and recent incarceration ($b = -0.186$, $p < .05$) are associated with children's contact with paternal grandparents. In both estimates, the current incarceration and recent incarceration coefficients are not statistically different from each other ($p = .586$ for estimates of contact with maternal grandparents, and $p = .318$ for estimates of contact with paternal grandparents).

Linking Paternal Incarceration to Children's Contact with Paternal Grandparents

The above results suggest a robust association between recent paternal incarceration and children's contact with paternal grandparents and, accordingly, the remaining analyses focus on this relationship. In the second analytic stage, presented in table 4, I present results from preliminary analyses that consider how two factors—(1) changes in the relationship between the father and mother; and (2) changes in the relationship quality between the father and his parents—may explain this association. Model 1, the equivalent of model 3 from table 3, includes all covariates (including pre-incarceration relationship status between the parents and pre-incarceration relationship quality between the father and his parents) and provides a baseline estimate for the subsequent models ($b = -0.185$, $p < .01$). In model 2, which adjusts for separation between the father and mother that occurred between the three- and five-year surveys, the recent paternal incarceration coefficient remains statistically significant but is reduced by 23 percent ($b = -0.142$, $p < .05$). As expected, parental separation is also negatively associated with children's contact with paternal grandparents. In model 3, which adjusts for change in the father's relationship with his parents, the coefficient is reduced by only 3 percent ($b = -0.180$, $p < .01$). Taken together, these findings provide preliminary and speculative evidence that changes in the parental relationship—but not changes in the father's relationship with his parents—reduce

Table 4. OLS Regression Models Estimating Children's Contact with Paternal Grandparents as a Function of Recent Paternal Incarceration, with Possible Mechanisms

	Model 1	Model 2	Model 3
	Baseline	+ Change in relationship between father and child's mother	+ Change in relationship between father and his parents
Recent paternal incarceration	-0.185 (0.068)**	-0.142 (0.068)*	-0.180 (0.068)**
Parents separated		-0.269 (0.060)***	
Change in relationship with parents			0.214 (0.049)***
Constant	1.186	1.233	0.945
R-squared	0.312	0.317	0.321
N	2,604	2,604	2,604

Note: All models include all control variables from model 3 of table 3. Standard errors in parentheses.

* $p < .05$ ** $p < .01$ *** $p < .001$

some of the association between recent paternal incarceration and children's contact with paternal grandparents.

Variation in Association between Paternal Incarceration and Children's Contact with Paternal Grandparents

In the final analytic stage, presented in table 5, I consider variation in the association between paternal incarceration and children's contact with paternal grandparents. Model 1 of table 5 includes all covariates from model 3 of table 3 and provides a baseline estimate for subsequent models. Models 2 and 3 extend model 1 to consider two interactions: (1) recent paternal incarceration \times co-residence with the father; and (2) recent paternal incarceration \times father's prior incarceration. Turning first to the interaction term between recent paternal incarceration and co-residence with the father, the statistically significant, negative interaction coefficient suggests that the association is stronger when parents live together prior to the father's incarceration. The coefficient for recent paternal incarceration is larger when parents live together ($b = -0.330$ $[-0.086 + -0.244]$) than when they do not live together ($b = -0.086$).⁶

This model also shows that the association between recent paternal incarceration and children's contact with paternal grandparents varies by fathers' prior incarceration status. The interaction term between recent paternal incarceration and prior incarceration is statistically significant. The coefficient for recent paternal incarceration is larger when fathers have experienced prior incarceration ($b = -0.248$ $[0.024 + -0.272]$) than when they have not ($b = 0.024$).

Table 5. OLS Regression Models Estimating Children's Contact with Paternal Grandparents as a Function of Recent Paternal Incarceration and Interaction Terms

	Model 1	Model 2	Model 3
	Baseline	+ Interaction with co-residential	+ Interaction with prior incarceration
Recent paternal incarceration	-0.185 (0.068)**	-0.086 (0.085)	0.024 (0.136)
Co-residential with father		0.001 (0.068)	
Co-residential with father \times recent paternal incarceration		-0.244 (0.122)*	
Father prior incarceration			0.137 (0.056)*
Father prior incarceration \times recent paternal incarceration			-0.272 (0.135)*
Constant	1.186	1.151	1.214
R-squared	0.312	0.313	0.313
N	2,604	2,604	2,604

Note: All models include all control variables from model 3 of table 3. Standard errors in parentheses.

* $p < .05$ ** $p < .01$

Discussion

Just as incarceration has become common among poorly educated, minority men, witnessing the incarceration of a romantic partner, father, or offspring has become common for many Americans. About 3 percent of US adults are under some type of correctional supervision, including the 2.3 million individuals currently incarcerated and the additional 4.9 million individuals on probation or parole. Incarceration is consequential for incarcerated men (Wakefield and Uggen 2010) and their romantic partners (Comfort 2008), but life-course theory suggests that the consequences of incarceration may extend to relationships that span across generations. In this paper, I use data from the Fragile Families and Child Wellbeing Study, a longitudinal survey of mostly unmarried parents, to consider the possibility that mass incarceration has implications for two aspects of intergenerational relationships: children's co-residence and contact with maternal and paternal grandparents.

To begin with, although there are descriptive differences in children's co-residence and contact with maternal and paternal grandparents, results from the most rigorous modeling strategy, the fixed-effects models, show that recent paternal incarceration neither increases nor decreases co-residence with maternal grandparents, co-residence with paternal grandparents, and contact with maternal grandparents. These fixed-effects models, which account for stable characteristics of families, suggest that the observed associations result from

stable, individual-level characteristics. Importantly, these null effects are in contrast to most research on the intergenerational consequences of another form of family disruption, divorce, which finds that divorce leads to increased co-residence and contact with maternal grandparents (Cherlin and Furstenberg 1986).

Although there are similarities between divorce and incarceration, notably that both usually involve the removal of men from households, divorce and incarceration involve sufficiently different processes that may explain the results found here. It may be that, for some families connected to incarcerated fathers, the need for support from maternal grandparents—through either co-residence or contact with children—is outweighed by countervailing factors. For example, the stigma of incarceration likely spills over to grandparents (Braman 2004), who may withdraw from relationships with their children, in-laws, and grandchildren. Another possibility is that considering average effects masks substantial heterogeneity in this relationship. Yet a third possibility is that the null associations reflect the fact that maternal grandparents, compared to paternal grandparents, are more involved in the lives of their grandchildren. These relationships are less variable than relationships with paternal grandparents, and therefore may be less subject to social factors such as incarceration (Mueller and Elder 2003; Uhlenberg and Hammill 1998).

In contrast, paternal incarceration is robustly associated with children's contact with paternal grandparents. This association persists in OLS regression models that adjust for a host of demographic, socioeconomic, and behavioral differences between families that do and do not experience paternal incarceration (including a lagged measure of contact with paternal grandparents) and in fixed-effects models that eliminate time-invariant unobserved characteristics. Supplemental analyses show that the deleterious consequences of paternal incarceration are concentrated among those incarcerated for three months or longer and among those incarcerated for violent offenses. By and large, these findings are consistent with research on the intergenerational consequences of divorce, which show that children's contact with their paternal grandparents declines precipitously after divorce (Cherlin and Furstenberg 1986; Johnson 1988). Consistent with life-course theory, which proposes that individuals live interdependently of one another, the marginal men who are incarcerated are connected to broader family systems. Paternal incarceration, by impeding children's relationships with their paternal grandparents, alters the organization of family relationships and spawns a renegotiation of family roles.

Why is paternal incarceration associated with less contact between children and their paternal grandparents? Though the Fragile Families data do not allow for a test of all plausible explanations linking paternal incarceration to children's contact with paternal grandparents, or a precise and rigorous test of possible explanations, they do allow for a preliminary consideration of two possibilities: parental separation and changes in the relationship between the father and his parents. Change in a father's relationship with his parents explains virtually none of the association between paternal incarceration and children's contact with paternal grandparents, but including a control

for parental separation (measured between the three- and five-year surveys) reduces this association. However, given the inability to disentangle the time-ordering of paternal incarceration and parental separation, it is possible that separation preceded incarceration and, accordingly, these results should be considered preliminary. Future research that can ensure proper time-ordering and ideally that conducts frequent (e.g., biweekly, monthly) interviews should rigorously interrogate the mechanisms linking paternal incarceration to intergenerational relationships.

Despite the preliminary nature of these results, there are several interpretations for the explanatory power of parental separation. For one, this is consistent with explanations of women as “kinkeepers,” the idea that women control men’s access to kin and, presumably, their children’s access to men’s kin (Lye 1996). This is also consistent with the idea that fathers broker relationships between the father’s children and his parents. Fathers likely see their children less after a separation and, accordingly, they have fewer opportunities to initiate contact with grandparents. More broadly, this finding is consistent with research on the negative consequences of divorce for children’s relationships with paternal grandparents (Cherlin and Furstenberg 1986), as well as with other research documenting that the consequences of incarceration for family life operate through parents’ relationship status (Turney and Wildeman 2013). It also suggests that the “package deal” of fatherhood—the idea that fathers’ relationships with children are conditional on their relationships with children’s mothers—extends to fathers’ families (Tach, Mincy, and Edin 2010).

Finally, and consistent with the life-course perspective, there exists heterogeneity in the relationship between paternal incarceration and children’s contact with paternal grandparents. For one, associations are concentrated among fathers living with mothers prior to incarceration. The fact that incarceration is most consequential for children with co-residential fathers is consistent with expectations. Compared to children of residential fathers, children of non-residential fathers have less contact with their paternal grandparents (Cherlin and Furstenberg 1986) and, therefore, it stands to reason that incarceration would not be independently consequential for this group. When fathers are living with children prior to incarceration, though, the removal of them from households likely leads to a renegotiation of family roles, and this is consistent with other research showing that the deleterious consequences of incarceration occur among fathers most connected to families prior to incarceration (Turney and Wildeman 2013).

The association between paternal incarceration and children’s contact with paternal grandparents is also concentrated among fathers with a history of incarceration, suggesting that churning through the criminal justice system, as opposed to the shock of incarceration, is most consequential for family ties. For these families, paternal incarceration may be a chronic stressor that causes fathers to exhaust the resources of their networks (Pearlin 1989). Additionally, given that grandparents often experience the cycle of confinement and release along with incarcerated fathers, the emotional toll of repeated incarcerations may cause grandparents to withdraw (Braman 2004, 59; Turanovic, Rodriguez,

and Pratt 2012, 936; also see Wildeman [2010], 301). Though the data cannot adjudicate between these or additional possibilities, future research should continue to investigate the complicated ways in which paternal incarceration affects intergenerational relationships.

Limitations

Several limitations exist. First, if parents are not in any (romantic or non-romantic) relationship at the time of the survey, there is no information about children's contact with paternal grandparents. Theoretically, it is likely that paternal incarceration is most consequential for these parents and, indeed, results suggest that co-residence moderates the association between paternal incarceration and children's contact with paternal grandparents. However, supplemental analyses show that estimates of the other three outcomes—co-residence with maternal grandparents, co-residence with paternal grandparents, and contact with maternal grandparents—are similar when restricting the sample to these observations, suggesting that this sample restriction may not unduly bias the results.

Additionally, grandparents were not interviewed and, consistent with much research on grandparents, all information about children's contact with grandparents comes from children's mothers and fathers (Dunifon 2013). Relatedly, children's co-residence and contact with maternal and paternal grandparents does not guarantee meaningful relationships and, unfortunately, the data do not include measures of emotional or cognitive dimensions of this relationship (i.e., feelings of closeness, bonding). Ideally, the data would include this information, as well as information about how many grandchildren the grandparents have (Uhlenberg and Hammill 1998), the geographic distance between grandparents and grandchildren (Cherlin and Furstenberg 1986; Uhlenberg and Hammill 1998), and grandparents' experiences with their own grandparents (Mueller and Elder 2003), all of which may be associated with frequency of contact between grandparents and grandchildren. However, given that some of this information is time invariant, at least across a young child's life, it is accounted for in the fixed-effects models.

There are additional limitations regarding the sample design and variable measurement. By design, the data exclude families living in rural areas and, given that the consequences of incarceration for families may vary across urban and rural social contexts, future research should consider both urban and rural families. These data also include relatively young children, and children's relationships with grandparents may evolve as they enter adolescence (e.g., Dunifon and Bajracharya 2012); future research should investigate age variation in the effects of incarceration on intergenerational relationships and, more broadly, family functioning. Additionally, incarceration experiences are sufficiently complex, and the data do not allow me to disentangle them all. For example, it is impossible to distinguish between prison incarceration and jail incarceration, and only limited information exists about the offense type or the duration of incarceration. A final limitation is the inability to estimate a causal effect of incarceration on children's co-residence and contact with grandparents, as fathers were not

randomly assigned to incarceration. The fixed-effects models adjust for within-person stable characteristics, such as childhood family instability, but they do not account for time-varying characteristics such as fathers' participation in crime, grandparents' health conditions, or father-child contact during incarceration. Thus, it is possible that unobserved heterogeneity biases the results.

Conclusions

Despite these limitations, this research, grounded in the life-course perspective, provides some of the first evidence linking paternal incarceration to intergenerational relationships. Importantly, incarceration has both null effects (on co-residence with maternal grandparents, co-residence with paternal grandparents, and contact with maternal grandparents) and negative effects (on contact with paternal grandparents), which is consistent with other recent research documenting the complex and countervailing consequences of incarceration on family life (e.g., Turney and Wildeman 2013). The deleterious consequences of paternal incarceration, at least with respect to children's contact with paternal grandparents, and coupled with the fact that children do not have compensatory *increased* contact with maternal grandparents, show that the effects of incarceration are not limited to the currently and formerly incarcerated and instead have rippling consequences across generations. These altered intergenerational relationships are likely consequential for all three generations, as grandparents may be an especially important source of financial and emotional support for children and mothers connected to incarcerated men (Dunifon 2013). Indeed, as the negative effects on children's contact with paternal grandparents are likely only one way in which incarceration has intergenerational implications, future research should investigate additional outcomes, the processes through which families renegotiate relationships after incarceration, and the consequences of this renegotiation.

Notes

1. In recent decades, there have been striking *relative* increases in maternal incarceration. But children much more commonly experience paternal incarceration than maternal incarceration (e.g., Wildeman 2009) and, therefore, I consider the consequences only of paternal incarceration.
2. There are, of course, important differences between incarceration and divorce. Incarceration, unlike divorce, usually results from criminal activity, is accompanied by shame and stigma (though, for earlier research on divorce and stigma, see Gerstel [1987]), and is often temporary (Wakefield and Uggen 2010).
3. There are some baseline differences between mothers and fathers with deceased parents and others in the analytic sample. Compared to mothers with deceased parents, mothers in the analytic sample are less likely to be non-Hispanic Black, are younger, are more likely to report living with both parents at age 15, and have fewer children ($p < .05$) (also see Högnäs and Carlson [2010]).
4. Importantly, these findings remain substantively similar when restricting the analyses to observations with non-missing data on children's contact with paternal grandparents (e.g., $b = -0.010$ in model 3).

5. Ordered logistic regressions models show that paternal incarceration is not associated with children's contact with maternal grandparents ($b = 0.067$, n.s., in the equivalent of model 3 of table 3) and is negatively associated with children's contact with paternal grandparents ($b = -0.270$, $p < .05$, in the equivalent of model 3 of table 3). The Brant test shows that the proportional odds assumption, the idea that the association between paternal incarceration and children's contact with grandparents is the same across all levels of children's contact with grandparents, holds (Brant 1990; Long and Freese 2006). Therefore, the estimates of being in the "once a week or more" category compared to the other categories are the same as the estimates of being in the "once a week or more" category or the "few times a month" category compared to the other categories.
6. In table 5, the recent paternal incarceration coefficient shows the relationship between paternal incarceration and children's contact with paternal grandparents when parents do not live together. To calculate the coefficient for recent paternal incarceration when parents do live together, it is necessary to add the coefficient for recent paternal incarceration and the coefficient for the interaction term (co-residential with father \times recent paternal incarceration). The interpretation of the additional interaction (father prior incarceration \times recent paternal incarceration) is calculated in the same manner.

About the Author

Kristin Turney is an Assistant Professor of Sociology at the University of California–Irvine. Her research investigates the complex, dynamic role of families in creating and exacerbating social inequalities. Specifically, her research considers the collateral consequences of incarceration for family life, the effects of depression on individuals and children, and the causes and consequences of childhood health inequalities. These substantive interests are accompanied by a methodological interest in causal inference.

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