Article

The Intergenerational Stability of Punishment: Paternal Incarceration and Suspension or Expulsion in Elementary School

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Abstract

Objectives: I extend the life-course theory of cumulative disadvantage to focus on continuity in punishment across generations. Specifically, I examine (1) the association between paternal incarceration and elementary school suspension or expulsion and (2) the extent to which behavior problems and weakened social bonds explain this association. *Method:* Analyses rely on logistic regression, propensity score matching, and mediation methods with data from the Fragile Families and Child Wellbeing Study ($N = 3,201$), a birth cohort of children born in large U.S. cities between 1998 and 2000. *Results:* The odds of school punishment among children who had a residential father incarcerated by age 5 are 75 percent greater than the odds for children in a matched control group. About one third of this association is accounted for by behavior problems and weakened social bonds. Even after accounting for behavior problems and social bonds, children whose fathers

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were incarcerated are at greater risk of school punishment. *Conclusions:* I find evidence of an intergenerational stability of punishment and mixed support for an intergenerational extension to cumulative disadvantage theory. Paternal incarceration is associated with children's likelihood of experiencing formal punishment in elementary school, and behavior problems and weakened social bonds explain part of this association.

An excessive emphasis on punishment in the last three decades of the twentieth century led not only to unprecedented levels of convictions and incarceration among adults in the United States (Clear and Frost 2014) but also heavy reliance on school suspension for children. Whereas 1 in 36 adults are under some form of correctional supervision each year (Kaeble et al. 2015), about 2 in 36 students are suspended from school (Civil Rights Data Collection 2018).[1] Independently, both systems of punishment disproportionately affect Black men and boys (Pettit and Western 2004; Skiba, Shure, and Williams 2012). Furthermore, each is associated with social exclusion, or the removal of individuals from important institutions and relationships, with potential consequences for persistence in delinquency and criminal justice involvement (Foster and Hagan 2015; Hirschfield 2018; Kirk and Wakefield 2018).

Beyond their independent impacts, research also suggests there are meaningful links between school punishment and criminal justice involvement. Most notably, prior research finds school suspension associated with later arrest and incarceration (Arum and Beattie 1999; Ramey 2016). The direction of this association is conceptualized as a "school-to-prison pipeline" (Mowen and Brent 2016), described within the framework of the life-course theory of cumulative disadvantage (Sampson and Laub 1997). Cumulative disadvantage theory integrates labeling (Lemert 1951) and informal social control theories (Laub and Sampson 2003; Sampson and Laub 1993) to propose that stigmatized formal sanctions may weaken social bonds, fostering continuity in delinquency and criminal sanctioning. In the context of school punishment, students are formally excluded from school in response to actual or perceived misbehavior. This exclusion and the deviant label accompanying it initiate a turning point in children's lives,

in which school attachment is attenuated and behavior is more scrutinized, facilitating persistence in delinquency and justice involvement (Hemphill et al. 2006; Mowen and Brent 2016).

This school-to-prison conceptualization, while meaningful and important, likely masks a more dynamic interplay at work between these two institutions. The life-course perspective not only recognizes the consequences of individuals' own experiences with formal punishment in their likelihood of future punishment but also emphasizes the role of "linked lives," such as parents and children (Elder 1985; Thornberry et al. 2003). For example, prior research finds the incarceration of parents associated with weakened social bonds and delinquency among their children (e.g., Mears and Siennick 2016). Thus, the accumulation of disadvantage may be evident not only in the continuity (or stability) of punishment across life stages but also in the stability of punishment across generations. More specifically, not only may there be a "school-to-prison pipeline" linking these two systems of punishment, there is also potential for a parent's incarceration to be associated with their child's risk of suspension or expulsion from school. I refer to this continuity across generations as the *intergenerational stability of punishment*.

In examining the intergenerational stability of punishment, I extend key concepts from labeling and cumulative disadvantage theories. First, "secondary deviance" (Lemert 1951) refers to increased behavior problems following receipt of a formal sanction. Extending this concept, *intergenerational secondary deviance* refers to child behavior problems associated with the incarceration of a parent (Hagan and Palloni 1990). Second, "secondary sanctioning" refers to a subsequent arrest or incarceration following an initial arrest. It represents the increased risk of involvement with the justice system following an initial sanction due to increases in surveillance rather than to increases in delinquency (Liberman, Kirk, and Kim 2014). Extending this concept, *intergenerational secondary sanctioning* refers to school punishment associated with the incarceration of a parent, after adjusting for child behavior problems. The cumulative disadvantage framework suggests it is due to societal reactions such as increased school surveillance that put children with an incarcerated parent (which educators may or may not be aware of) at greater risk of school punishment regardless of their behavior.

The aim of this study is to broaden understandings of the interaction between schools and the justice system by (1) examining the association between paternal incarceration and suspension or expulsion in elementary school and (2) identifying potential mechanisms of this association. For this, I rely on an intergenerational extension to cumulative disadvantage

theory (Sampson and Laub 1997). I focus on incarceration of fathers rather than mothers because maternal incarceration is much less prevalent, and findings regarding its association with child behavior problems have been inconsistent (Turney and Wildeman 2015; Wildeman and Turney 2014). In contrast, paternal incarceration among children who had a relationship with their father is associated with aggressive behavior (especially for boys) and grade retention (Turney and Haskins 2014; Wildeman 2010). I focus on elementary school because younger children are more likely to be living with their fathers and may thus be more impacted by his removal. In addition, some research suggests exclusionary punishment in elementary school is associated with increased physical aggression (Jacobsen, Pace, and Ramirez forthcoming), potentially setting children off on behavioral trajectories that are difficult to redirect (e.g., Broidy et al. 2003). If paternal incarceration is associated with greater risk of elementary school suspension or expulsion, it may imply that current criminal justice practices are perpetuating a cycle of punishment and social exclusion among disadvantaged families.

Suspension, Expulsion, and the School-to-prison Pipeline

Exclusionary discipline, defined as punishment involving removal of a student from a classroom or school, includes in-school suspension (temporary exclusion from class), out-of-school suspension (temporary exclusion from school), and expulsion (permanent exclusion). Expulsion is rare and reserved for serious offenses, but suspension has emerged as a common response to minor misbehavior. Indeed, the majority of suspensions each year are for attendance problems, disrespect, or something other than violence, weapons, substance use, or possession (Colorado Department of Education 2018; Skiba et al. 2014). Due to reliance on exclusionary punishment for minor misbehavior, it has become a common experience, particularly for racial minorities. Among Black children, 67 percent of boys and 45 percent of girls are suspended by the end of high school, compared to 39 percent and 20 percent of Whites (Shollenberger 2014). Although less is known about suspension in elementary school, some suggest it is prevalent even then. Only 2 percent of elementary students are suspended annually (Losen and Martinez 2013), but risk accumulates over time. By age 9, about 11 percent of children born in urban areas have been suspended or expelled. For Black children, this jumps to 40 percent of boys and 15 percent of girls,

compared to 8 percent and 2 percent for their White or other-race counterparts (Jacobsen et al. forthcoming).

Cumulative disadvantage theory would suggest such exclusionary punishment at an early age may be harmful for child development, facilitating weakened attachment to school and persistence in behavior problems and punishment (Mowen and Brent 2016; Sampson and Laub 1997). A suspension or expulsion labels students as delinquents and removes them from school activities and interactions, potentially causing them to fall behind and become further disengaged (Bowditch 1993). Less involvement in school may facilitate more unstructured time with peers and greater opportunities for delinquency (Hirschi 1969; Osgood et al. 1996). Indeed, such sanctions in elementary school are associated with increased physical aggression (Jacobsen et al. forthcoming), a predictor of adolescent violence (Broidy et al. 2003). These secondary behavior problems may be accompanied by repeated experiences with punishment; 40 percent of U.S. students suspended each year are suspended again before the year's end (Civil Rights Data Collection 2018). However, some of this repeated punishment is likely due not to secondary deviance but to secondary sanctioning. Secondary sanctions represent subsequent punishments resulting from heighted scrutiny rather than increased behavior problems following an initial sanction (Liberman et al. 2014). A suspension or expulsion may remain on children's school records, marking them "at risk" by educators and school resource officers (Ferguson 2001; Weissman 2015), increasing their likelihood of subsequent punishment or justice involvement, regardless of their behavior problems. In sum, exclusionary punishment is a common experience for some children, particularly racial minorities, and it has the potential to spur negative developmental trajectories; however, research on its predictors in elementary school is nascent.

The Intergenerational Stability of Punishment

This school-to-prison conceptualization, in which students are pushed out of schools and into jails and prisons, is useful but likely masks a more dynamic interchange between schools and the justice system. The life-course perspective recognizes that events such as punishment are experienced within a context of "linked lives," such as family ties (Elder 1985). Thus, formal punishment may have consequences that extend beyond the person experiencing it directly to family members (Goffman 1963). My aim is to show how school punishment may be influenced by paternal incarceration. Indeed, the accumulation of disadvantage plays out not only in the

stability of punishment across life stages (school discipline as child to incarceration as adult) but also in the stability of punishment across generations. Therefore, in addition to a "school-to-prison pipeline" linking schools and the justice system, there may be an association between a father's incarceration and his child's suspension or expulsion.

Among the few studies that have examined this association, some suggest suspension is more common among children whose father or mother is *currently* incarcerated (Hanlon et al. 2005; Shlafer and Poehlmann 2010; Trice and Brewster 2004), but only one of which I am aware focuses on extended intergenerational impacts. Using a nationally representative sample, Johnson (2009) finds suspension or expulsion more likely among children whose fathers have *ever* been incarcerated but does not find this association for mothers. I build on these studies by exploring mechanisms of this association in elementary school, particularly among children who were living with their father prior to his incarceration. Children who were not living with their father may be less affected or even unaware when the incarceration occurs.

Mechanisms

In examining the stability of punishment from father to child, I focus on two key mechanisms: (1) child behavior problems and (2) weakened social bonds. Extending Lemert's (1951) concept of secondary deviance, *intergenerational secondary deviance* refers to child behavior problems associated with the sanction of a parent. Prior research finds consistent evidence of increased delinquency and aggression following paternal incarceration (Porter and King 2015; Roettger and Swisher 2011; Wildman 2010). Some of this increase in behavior problems may be related to children's self-perceptions or reflected appraisals following paternal incarceration (Matsueda 1992). For example, the incarceration may shape expectations others have for the child's behavior (Wildeman et al. 2017), and the child may act accordingly. However, cumulative disadvantage theory suggests, "we do not necessarily need to assume that personal 'identities' change as a result of labeling" (Sampson and Laub 1997:19). Instead, it emphasizes weakened social bonds that may accompany or facilitate intergenerational secondary deviance in its association with school punishment. In particular, I focus on factors related to two key types of social bonds: (1) family relationships and (2) parental employment.

An association between paternal incarceration and school punishment may be explained in part by weakened family relationships that facilitate

intergenerational secondary deviance. Prior research finds incarceration associated with marriage and cohabitation dissolution (Apel 2016; Siennick, Stewart, and Staff 2014). As an incarcerated father's relationship with the mother erodes, or the mother repartners, the father's contact with the child may diminish, limiting his parental involvement, including in the child's schooling (Haskins and Jacobsen 2017; Turney and Wildeman 2013). Furthermore, this family instability may hinder the mother's capacity to provide warm or effective parenting (Turney 2014). Such weakened family relationships reduce supervision over the child's schooling and behavior; they also diminish the child's "stake in conformity" (Toby 1957), facilitating opportunities for intergenerational secondary deviance and increasing risk of school punishment.

An association between paternal incarceration and school punishment may also be partially explained by factors related to parent employment. After an incarceration, the father may be excluded from employment opportunities (Pager 2003) or may avoid them out of fear of further apprehension (Brayne 2014). This lack of work, and accumulated legal debt that often follows (Martin et al. 2018), may limit the father's ability to contribute financially. Furthermore, the mother's own earning power may be reduced because she must engage in more childcare and household activities while the father is incapacitated, and following his release if their relationship has deteriorated (Fishman 1990). Indeed, paternal incarceration is associated with maternal material hardship (Schwartz-Soicher, Geller, and Garfinkel 2011). Such circumstances limit children's opportunities for involvement in prosocial activities, leaving fewer resources for normative development and providing situations more conducive to intergenerational secondary deviance and school punishment (Brooks-Gunn and Duncan 1997; Tremblay 2013).

Beyond Behavior Problems

Intergenerational secondary deviance should explain part of the association between paternal incarceration and school punishment via the weakening of social bonds described above, but an additional association should remain after controlling for behavior problems. In examining the stability of punishment across life stages, Liberman and colleagues (2014) found an association between a youth's first arrest and later rearrest, largely independent of secondary deviance. They refer to this subsequent punishment as "secondary sanctioning" due to heightened scrutiny following an initial sanction. I extend this conceptualization by defining *intergenerational*

secondary sanctioning as school punishment following paternal incarceration, after accounting for behavior problems. Ferguson (2001:90–95) suggests the decisions educators make about individual students are influenced by perceptions they have of students' families. She finds that once students are considered "at-risk," their classroom behavior becomes more visible, increasing their risk of punishment. Knowing a child's father has been incarcerated may alter teacher perceptions or increase their expectations of behavior problems (Dallaire, Ciccone, and Wilson 2010; Wildeman et al. 2017), potentially making them more likely to respond with suspension or expulsion. However, school authorities need not be aware of the incarceration itself for intergenerational secondary sanctioning to occur. Instead, they may become aware of its more visible consequences, such as the mother's economic circumstances or the father's absence due to incapacitation or union dissolution. These characteristics related to weakened social bonds may also call attention to the child, thus partially explaining a remaining association with school punishment, after accounting for behavior.

Broader Package of Disadvantage

Within a cumulative disadvantage framework, it is important to account for risk factors that have already accumulated prior to any formal sanction. In the context of paternal incarceration, these factors may be related to parent substance abuse, domestic violence, or other antisocial behavior (Giordano and Copp 2015). Prior to his incarceration, the father's lifestyle could have already hindered family bonds or stable employment (Braman 2004; Edin, Nelson, and Paranal 2004). The child may have experienced maltreatment or an otherwise harmful environment, even prenatally. These may place the child at greater risk of behavior problems, regardless of incarceration (Moffitt 1993; Raine 2002; Thornberry et al. 2010). Additionally, both school punishment and paternal incarceration tend to be concentrated among children in disadvantaged schools and neighborhoods (Gervais 2012; Hagan and Foster 2012; Skiba et al. 2014). Therefore, the ability to account not only for individual student and family attributes but also characteristics of the schools and neighborhoods in which children are embedded is critical.

After controlling for these potential confounders, my intergenerational perspective implies the association between paternal incarceration and school punishment may be most impactful for children who lived with their father prior to his incarceration. For these, paternal incarceration may be an additional source of disadvantage that further weakens social bonds and fosters behavior problems. In contrast, children who did not live with their

fathers may be less affected or even unware when the incarceration occurs. For these, an association between paternal incarceration and school punishment should be largely driven by selection.

Current Study

Using data from the Fragile Families Study, I first estimate the overall association between paternal incarceration and school punishment by age nine, using methods for addressing concerns around selection and the timing of incarceration. To ensure consistency with prior research, I also attempt to replicate the association between paternal incarceration and child behavior problems. I then examine variation in these associations by father residential status. For children who weren't living with their father, the association with school punishment may be driven by selection. But for children who lived with their father, this association should be partially explained by behavior problems and weakened social bonds. If children of incarcerated fathers are at greater risk of school punishment because of intergenerational secondary deviance, then behavior problems and the weakened bonds that facilitate such problems should explain part of this association. If these children are at greater risk of school punishment because of intergenerational secondary sanctioning, then a positive association should remain after accounting for behavior problems; however, I do not measure changes in surveillance over the child and therefore cannot test intergenerational secondary sanctioning directly. Analyses follow recommendations for intergenerational research (Thornberry 2009) by relying on parent reports of paternal incarceration and child self-reports (supplemented with parent reports) of school punishment and behavior.

Data and Methods

Sample

Fragile Families is a birth cohort study of nearly 5,000 children born in hospitals in 20 of the largest U.S. cities (populations more than 200,000) between 1998 and 2000. Unmarried parents were oversampled and represent about three quarters of the original sample, making the data overrepresentative of socioeconomically disadvantaged families. These data are ideal because they include a large contemporary sample of children tracked from birth to elementary school, many of whom have already experienced paternal incarceration, school punishment, or both by age 9. While findings from these data may not be generalizable beyond disadvantaged urban families,

for my research question, this sample of children and families is most relevant because they reflect the population and historical time frame of focus.

Mothers and fathers were interviewed either in person or by telephone shortly after their child's birth. Both parents were contacted again by phone in follow-up waves around the time the child turned one (Y1), three (Y3), five (Y5), and nine (Y9). By Y9, 76 percent of mothers and 59 percent of fathers had remained in the study. In addition to biological parent surveys, the primary caregiver (92 percent biological mother at Y9) was interviewed at home at Y3 (79 percent response rate) and Y5 (81 percent response rate) and by phone at Y9 (77 percent response rate). Children whose caregivers participated at Y9 were also interviewed (99 percent response rate). Of the 4,898 children in the full study, my analytic sample consists of $N = 3,201$.[2] This sample is comparable in size and composition to other Fragile Families research examining school outcomes (e.g., Turney and Haskins 2014). Differences between my analytic sample and full Fragile Families sample are small, but some are statistically significant. Children in my sample are more likely to be Black and less likely to be Hispanic but are no different in terms of parents' postsecondary education or income. Both parents are less likely to have lived with both of their own biological parents as adolescents, but fathers in my sample are more likely to have lived with their child at Y1.

Elementary school suspension or expulsion. Exclusionary punishment is a binary measure taken primarily from Y9 child self-reports of having "ever been suspended or expelled from school." Because the wording specifies "from school," it is possible in-school suspensions are undercounted. If so, the prevalence of suspension or expulsion in this sample may be even higher. Primary caregivers were also asked about the child's school punishment at Y9 but only regarding absences due to suspension or expulsion in the current or most recent school year. Thus, this item only captures out-of-school suspensions and expulsions in the year leading up to the survey. Nevertheless, cases in which the child did not report a suspension or expulsion, but the primary caregiver did, are coded in the affirmative (5 percent of all suspensions or expulsions). The timing of suspensions or expulsions is not reported; however, I assume all occur between Y5 and Y9 because at Y5 children have not yet started first grade.[3]

Paternal incarceration. My measure of paternal incarceration captures prison or jail time occurring after Y1 and before or by Y5. Incarcerations occurring by Y9 are not included because it would prevent an examination of

mechanisms at Y5 and would overlap with the timing of suspension or expulsion (for a similar approach, Turney and Haskins 2014). Furthermore, changes to the wording of the parent questionnaires prevent me from identifying incarcerations occurring between Y5 and Y9. In sensitivity checks described later on, I use an alternative measure that separates out fathers incarcerated for the first time between Y1 and Y5, to address additional concerns with the timing of incarceration relative to controls and to account for earlier incarcerations. My measure relies on direct reports (e.g., "Have you ever spent time in a correctional institution?") and indirect reports (e.g., "Please tell me why your romantic relationship ended.") of both the mother and father, although questions vary somewhat across surveys and waves. In cases where mother and father reports disagree or where one parent reports the father was incarcerated but the other's report is missing or unknown, fathers are coded as having experienced incarceration. Even still, results should be interpreted with caution as the father's incarceration may be underreported by either parent (Geller et al. 2012).

Child behavior problems. To address potential reporting bias and capture a wide array of behaviors likely associated with school punishment, I include two measures of child behavior problems: (1) parent-reported externalizing behavior at Y5 and (2) self-reported delinquency by Y9. Parent reports capture the child's current behavior as perceived by the primary caregiver. This is important because the primary caregiver is the adult who likely spends the most time with the child and is also the one most likely notified of misbehavior in school. Even still, relying on parent reports alone likely misses some behaviors at school or elsewhere, where the caregiver is not present. To address this gap without access to administrative data on specific incidents, I rely on child self-reports of misbehavior. These include school behaviors specifically (truancy, cheating, and disobedience) and delinquent behaviors more generally.

Parent-reported externalizing behavior is a standardized (z-score) mean scale of 24 items from the Child Behavior Checklist, 4–18 (Achenbach and Rescorla 1992) coded on a scale of 1 = not true to 3 = often or very true. Examples include "physically attacks people" and "disobedient at school or in childcare." Delinquency is based on the Things You Have Done Scale (Maumary-Gremaud 2000).[4] Sixteen items asking "Have you ever . . ." are summed; examples include "cheated on a school test," "had a fist fight with another person," "skipped school without an excuse," and "smoked marijuana." Regression models use a natural log transformation of the latter measure (after adding 1) to account for a nonnormal distribution. Using

parent-reported behavior problems measured at Y5 allows me to establish the appropriate time order among key variables, but self-reported delinquency is measured concurrently with the outcome. This is an important limitation, but I opt to include self-reports as well because they capture behaviors most concurrent with school punishment. They also include some serious behaviors that may be more likely to lead to an official sanction.

Weakened social bonds. I include indicators of the weakening of two key types of bonds: family relationships and parent employment. Four measures of family relationships are included, each observed at Y5. The first two are binary indicators of whether the mother and father have separated or divorced, and whether the mother has repartnered. The third is a measure of low father involvement represented by a mean scale of eight items ($\alpha =$ .86) about the frequency with which the father reads to, plays with, or engages in other activities with the child. Responses range from $0 =$ none to $7 =$ seven days per week and are reverse coded. The fourth is a binary indicator of maternal harsh parenting in which respondents are coded 1 if the mother reported spanking the child a few times or more in the past month. Two measures related to parent employment are included, each of which is observed at Y5. The first is a binary indicator of whether the father is unemployed, and the second is the mother's income-to-poverty ratio, based on thresholds designated by the Census Bureau.

School, neighborhood, and other controls. I control for individual child and family attributes, as well as characteristics of the schools and neighborhoods in which children are embedded (50 control variables in total). School characteristics include whether the child's school at Y9 was majority Black, whether it was majority Hispanic, and whether a majority of students were eligible for free or reduced-price lunch (proxy measure for school socioeconomic status). Each is based on a percentage averaged across the current and preceding school years at Y9. Percentages greater than 50 percent are coded as 1 (dichotomized to avoid issues with skewness). I also control for the school's out-of-school suspension rate (measure of punitiveness or reliance on exclusionary discipline), mother's neighborhood disadvantage, the sample city, and a host of other characteristics listed in Table 1 and Table A1. Except for school and neighborhood characteristics, all controls are observed at the child's birth or one year later (prior to a Y1–Y5 incarceration) or are assumed to be time stable (e.g., mother impulsivity at Y3).

Table 1. Descriptive Statistics of Variables Used in Analysis by Paternal Incarceration.

Variables	Full Analytic Sample		Never Incarcerated by Y5		Ever Incarcerated by Y5				Never-ever Mean Difference
					By Y1 Only		Y1–Y5		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Outcome variable									
Suspended or expelled by Y9	0.19		0.13		0.19		0.29		−0.12***
Main explanatory variable									
Father incarcerated between Y1 and Y5	0.31		0.00		0.00		1.00		−0.68
Mediating variables									
Child behavior problems									
Parent-reported behavior problems (z-scores)	−0.02	1.01	−0.17	0.94	0.01	0.98	0.25	1.09	−0.35***
Self-reported delinquency (0–16)	1.06	1.58	0.90	1.44	1.09	1.57	1.33	1.78	−0.36***
Weakened family bonds									
Father low involvement, Y5 (1–8)	4.61	1.57	4.45	1.50	4.68	1.56	4.86	1.67	−0.35***
Mother harsh parenting, Y5	0.17		0.14		0.19		0.20		−0.06***
Mother and father separated, Y5	0.48		0.34		0.47		0.73		−0.30***
Mother has new partner, Y5	0.14		0.09		0.16		0.22		−0.11***
Weakened employment bonds									
Mother income-to-poverty ratio, Y5 (0–3.58)	0.90	0.55	1.05	0.58	0.80	0.45	0.67	0.44	0.34***
Father unemployment, Y5	0.11		0.07		0.10		0.19		−0.09***
Control variables									
School and neighborhood controls									
School majority Black, Y9	0.35		0.30		0.38		0.44		−0.12***

(continued)

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Table 1. (continued)

Variables	Full Analytic Sample		Never Incarcerated by Y5		Ever Incarcerated by Y5				Never-ever Mean Difference
					By Y1 Only		Y1–Y5		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
School majority Hispanic, Y9	0.22		0.21		0.25		0.21		−0.01
School majority free/red-price lunch, Y9	0.68		0.59		0.77		0.79		−0.19***
School out-of-school suspension rate, Y9 (0–0.40)	0.04	0.05	0.03	0.04	0.04	0.05	0.05	0.05	−0.01***
Neighborhood disadvantage (z-scores)	−0.01	0.89	−0.11	0.89	0.03	0.82	0.16	0.89	−0.23***
Other controls									
Father lives with child, Y1	0.70		0.75		0.73		0.59		0.11***
Father incarcerated by Y1	0.34		0.00		1.00		0.62		−0.74***
Child male	0.52		0.53		0.48		0.53		0.02
Child non-Hispanic Black	0.51		0.43		0.56		0.63		−0.18***
Child Hispanic	0.30		0.32		0.30		0.26		0.05**
Child age in months, Y5 (56–74)	61.60	2.70	61.51	2.64	61.40	2.62	61.84	2.83	−0.18***
Father age, Y0 (14–67)	28.16	7.23	29.57	7.45	28.05	6.84	25.68	6.27	3.12***
Mother criminal justice contact by Y3	0.19		0.13		0.25		0.28		−0.14***
Father impulsivity, Y1 (z-scores)	0.01	1.00	−0.25	0.87	0.03	0.97	0.46	1.09	−0.57***
Mother impulsivity, Y3 (z-scores)	0.00	1.00	−0.12	0.97	0.03	0.94	0.20	1.04	−0.27***
Father substance abuse by Y1	0.15		0.07		0.21		0.26		−0.17***
Mother's victimization by father by Y1	0.12		0.06		0.17		0.19		−0.12***
Father and mother married, Y0	0.24		0.37		0.10		0.07		0.29***
Father and mother cohabiting, Y0	0.37		0.33		0.48		0.37		−0.07
Mother has post-secondary schooling, Y0	0.36		0.46		0.27		0.22		0.23***

(continued)

Table 1. (continued)

Variables	Full Analytic Sample		Never Incarcerated by Y5		Ever Incarcerated by Y5				Never-ever Mean Difference
					By Y1 Only		Y1–Y5		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Father has postsecondary schooling, Y0	0.31		0.42		0.20		0.16		0.25***
Either parent material hardship, Y1	0.60		0.49		0.66		0.76		−0.24***
Mother depression at Y1	0.15		0.12		0.18		0.20		−0.08***
Either parent not a U.S. citizen	0.15		0.20		0.10		0.09		0.11***
Mother lived with both parents at age 15	0.41		0.49		0.34		0.31		0.17***
Father lived with both parents at age 15	0.45		0.54		0.39		0.32		0.20***
Mother religious attendance, Y0	0.22		0.25		0.17		0.18		0.07***
Mother cognitive ability (z-scores)	−0.01	1.00	0.05	1.03	−0.07	1.02	−0.09	0.93	0.13**
Father cognitive ability (z-scores)	−0.02	1.00	0.02	1.04	−0.06	0.91	−0.07	0.95	0.09
Child low birth weight	0.10		0.08		0.10		0.12		−0.03**
Children in mother household, Y1 (0–9)	2.31	1.31	2.21	1.26	2.40	1.38	2.45	1.35	−0.23***
N	3,201		1,756		466		979		

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about the child's school discipline by Y9. Children with deceased or unknown fathers by the five-year survey are excluded. Sample city dummy variables are not shown for parsimony. Results are unweighted and based on the first of 25 multiply imputed data sets. Y0 = baseline (birth); Y1 = one-year survey; Y3 = three-year survey; Y5 = five-year survey; Y9 = nine-year survey.

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

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Analytic Strategy

Analyses proceed in four stages. First, I use a series of logistic regression models to examine the overall association between paternal incarceration and school punishment. These are supplemented with linear regression models testing the association between paternal incarceration and child behavior problems. Second, I split the sample into children who lived with their father at Y1 ($n = 2,229$) and those who did not ($n = 972$) to examine variation by father residential status. Third, I employ propensity score matching as an alternative to my regression models. Propensity score matching allows for comparing child outcomes across treatment and control groups (Apel and Sweeten 2010; Rosenbaum and Rubin 1983). Treatment cases represent children whose fathers were incarcerated between Y1 and Y5, and control cases include children whose fathers were not incarcerated during this time. A benefit of propensity score matching over standard regression is that it makes no assumptions about the functional form of associations between the covariates and school punishment; it also excludes control cases that are very different from treatment observations (Stuart 2010). As a robustness check, two matching methods are used: nearest neighbor, which matches treatment to control observations with the closest propensity score, and kernel matching, which weights control cases by their distance from treated cases. For more conservative estimates, incarceration by Y1 is included as a covariate. Fourth, using logistic regression with the matched data, I examine the extent to which behavior problems and weakened social bonds explain differences between treated and control groups. For this, I rely on the Karlson, Holm, and Breen (2012; KHB) method of mediation for binary outcomes. This accounts for the change in scaling that occurs when adding mediators to a logit model. The rescaling is due to the fixed residual variance in binary-outcome models; it may result in coefficients increasing when mediators are added, potentially underestimating any indirect effect (Vanderweele 2015; Winship and Mare 1984). The KHB method allows for proper comparison of coefficients across models and provides a formal estimation and significance test of total, direct, and indirect effects (Kohler, Karlson, and Holm 2011; for an application in criminology, see Siennick et al. 2014).

Before running analyses, missing data are addressed. Most variables are missing less than 10 percent of observations and only two are missing more than 20 percent: low father involvement (23 percent) and parent-reported externalizing behavior (26 percent). I use multiple imputation with chained equations and perform the above-described analyses using 25 multiply

imputed data sets. As an alternative to regression with imputed data, I used full information maximum likelihood with structural equation models in a sensitivity check not shown (Wothke 2000), and results were very similar. All analyses are unweighted, but I control for whether parents were married at baseline because unmarried parents were oversampled.

Results

Sample Description

Institutional punishment and socioeconomic disadvantage are common in my sample. Table 1 reveals that 31 percent (26 percent of those with a residential father) experienced paternal incarceration after their first birthday (Y1) but before first grade (Y5)[5]; of these, 29 percent (19 percent of all children) have been suspended or expelled just four years later. More than half my sample is Black and 30 percent is Hispanic. Fifty-four percent of Blacks and 41 percent of Hispanics have a father with an incarceration history at Y5, compared to 28 percent of White or other-race children. Twenty-nine percent of Blacks and 10 percent of Hispanics have been suspended or expelled by Y9, compared to 6 percent of White or other-race children.

Another key pattern is strong heterogeneity between children whose fathers never experienced incarceration and those who have—they are significantly different on nearly every variable presented here. Children whose fathers have been incarcerated are more likely to experience school punishment, display behavior problems, and experience weakened social bonds. Their fathers are less involved in parenting and more likely to be unemployed. Their mothers are more likely to experience relationship instability, economic disadvantage, and engage in harsh parenting. This family and economic disadvantage appears especially severe among children whose fathers were incarcerated between Y1 and Y5. I emphasize that these numbers may not be representative of urban families at large because unmarried parents were oversampled, resulting in more disadvantage. However, multivariable analyses control for parents' marital status to account for such differences (Geller et al. 2012).

Multivariable Logistic Regression Models

Table 2 presents logistic regression results showing the overall association between paternal incarceration and school punishment. Bivariate results in panel A indicate the odds of suspension or expulsion are more than

Table 2. Results of Logistic Regression Models Showing Difference in the Log Odds of Early Suspension or Expulsion Associated with Paternal Incarceration.

Variables	A Bivariate Logit (SE)	B Add Controls for School and Neighborhood Characteristics Logit (SE)	C Add Other Controls Logit (SE)
Main explanatory variable			
Father incarcerated between Y1 and Y5	0.878 (0.094)***	0.699 (0.098)***	0.454 (0.120)***
School and neighborhood controls			
School majority Black		0.665 (0.138)***	0.261 (0.155)
School majority Hispanic		−0.212 (0.161)	0.145 (0.204)
School majority free/reduced-price lunch		0.137 (0.154)	0.012 (0.171)
School out-of-school suspension rate ln(sqrt + 1)		1.861 (0.451)***	1.350 (0.536)*
Neighborhood disadvantage		0.285 (0.060)***	0.153 (0.069)*
N	3,201	3,201	3,201

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about child's experience with suspension or expulsion by Y9. Children with deceased/unknown fathers by Y5 are excluded. Other controls include paternal incarceration by Y1, child and parent demographic and health characteristics, parents' marital status at child's birth, parent antisocial behaviors, religiosity, cognitive ability, and sample city. Results combined across 25 multiply imputed data sets; analyses are unweighted. SE = standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up survey; Y9 = nine-year follow-up survey.
*p < .05. ***p < .001 (two-tailed tests).

double—141 percent greater ($e^{0.878}$) [exp(b) − 1) · 100] for children whose fathers were incarcerated between Y1 and Y5, compared to those who were not ($p < .001$). This association declines by about 20 percent when accounting for school and neighborhood characteristics (panel B) and by nearly half when other controls are included as well (panel C). Nevertheless, when adjusting for all controls, the incarceration coefficient remains positive, large, and statistically significant. The odds of school punishment by Y9 are 58 percent greater ($e^{0.454}$) for children whose fathers were incarcerated than the odds for other children ($p < .001$).[6] To ensure consistency with prior research, I also examine the association between paternal incarceration and (1) parent-reported externalizing behavior and (2) the natural log of self-reported delinquency (linear regression models presented in Table A2). Adjusting for controls, results for externalizing behavior suggest children whose fathers were incarcerated between Y1 and Y5 engage in 0.150 more standard deviation units of externalizing behavior ($p < .01$). Results for the log of delinquency suggest paternal incarceration is associated with a level of delinquency that is 7 percent higher ($b = .067$) than that of other children ($p < .01$).

Next, I divide the sample into children who lived with their father at Y1 and those who did not in order to assess the extent to which the association with school punishment varies between groups. Table 3 presents results for children with a nonresidential father. Bivariate results in panel A suggest the odds of school punishment following paternal incarceration are 61 percent greater ($e^{0.477}$) than the odds among children whose fathers were not incarcerated ($p < .01$). However, when controls are added in panel C, the coefficient declines to nearly zero, rendering it statistically insignificant. This suggests that among children with nonresidential fathers, this association is driven primarily by selection on observed characteristics.

Table 4 shows results for children with a residential father. Bivariate results in panel A indicate the odds of school punishment for children whose fathers were incarcerated between Y1 and Y5 are nearly three times higher ($e^{1.048}$) than the odds for children whose fathers were not incarcerated ($p < .001$). The coefficient declines by nearly half when all controls are included (panel C) but remains positive and statistically significant. The odds of school punishment among children with a residential father are twice as high ($e^{0.680}$) for those whose father was incarcerated between Y1 and Y5 than for other children ($p < .001$). Moreover, supplementary analyses suggest the variation in results by father residential status is statistically significant.[7] I check the robustness of results for residential fathers in panel D by limiting the sample to children whose residential fathers *ever*

Table 3. Results of Logistic Regression Models Showing Difference in the Log Odds of Early Suspension or Expulsion Associated with Paternal Incarceration (Children with Nonresidential Fathers).

Variables	A Bivariate Logit (SE)	B Add Controls for School and Neighborhood Characteristics Logit (SE)	C Add Other Controls Logit (SE)
Main explanatory variable			
Father incarcerated between Y1 and Y5	0.477 (0.155)**	0.361 (0.161)*	0.016 (0.219)
School and neighborhood controls			
School majority Black		0.521 (0.228)*	0.390 (0.264)
School majority Hispanic		−0.331 (0.266)	−0.008 (0.339)
School majority free/reduced-price lunch		0.178 (0.276)	0.058 (0.311)
School out-of-school suspension rate ln(sqrt + 1)		1.939 (0.732)**	1.374 (0.950)
Neighborhood disadvantage		0.170 (0.098)	0.098 (0.123)
N	972	972	972

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about the child's experience with suspension or expulsion by Y9. Children with deceased/unknown fathers by Y5 or whose fathers were living with them at Y1 are excluded. Other controls include paternal incarceration by Y1, child and parent demographic and health characteristics, parents' marital status at child's birth, parent antisocial behaviors, religiosity, cognitive ability, and sample city. Results combined across 25 multiply imputed data sets; analyses are unweighted. SE = standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up survey; Y9 = nine-year follow-up survey.
*$p < .05$. **$p < .01$ (two-tailed tests).

Table 4. Results of Logistic Regression Models Showing Difference in the Log Odds of Early Suspension or Expulsion Associated with Paternal Incarceration (Children with Residential Fathers).

Variables	A Bivariate Logit (SE)	B Add Controls for School and Neighborhood Characteristics Logit (SE)	C Add Other Controls Logit (SE)	D Limit Sample to Children with Ever-incarcerated Father Logit (SE)
Main explanatory variable				
Father incarcerated between Y1 and Y5	1.048 (0.119)***	0.863 (0.125)***	0.680 (0.149)***	0.468 (0.232)*
School and neighborhood controls				
School majority Black		0.735 (0.172)***	0.191 (0.197)	0.383 (0.270)
School majority Hispanic		−0.164 (0.201)	0.200 (0.261)	0.134 (0.365)
School majority free/reduced-price lunch		0.066 (0.183)	−0.061 (0.204)	−0.235 (0.296)
School out-of-school suspension rate ln(sqrt + 1)		1.793 (0.568)**	1.255 (0.656)	1.338 (0.930)
Neighborhood disadvantage		0.348 (0.075)***	0.179 (0.087)*	0.007 (0.122)
N	2,229	2,229	2,229	916

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about child's experience with suspension or expulsion by Y9. Children with deceased/unknown fathers by Y5 or whose fathers were not living with them at Y1 are excluded. Other controls include paternal incarceration by Y1, child and parent demographic and health characteristics, parents' marital status at child's birth, parent antisocial behaviors, religiosity, cognitive ability, and sample city. Results combined across 25 imputed data sets; analyses unweighted. $SE =$ standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up survey; Y9 = nine-year follow-up survey.
*$p < .05.$ **$p < .01.$ ***$p < .001$ (two-tailed tests).

spent time in prison or jail by Y5 ($n = 916$), including those incarcerated prior to Y1, in order to minimize heterogeneity and create comparison groups with similar risk of Y1–Y5 incarceration. As shown, the coefficient declines by 31 percent but remains moderate in size and statistically significant ($b = .468, p < .05$). In sensitivity checks in Table A3, I address additional concerns with the timing of incarceration relative to controls. Results hold up even when the father was incarcerated for the first time between Y1 and Y5.[8]

Propensity Score Matching and Mediation Models

In Table 5, I move from my regression model approach to propensity score matching, focusing only on children who lived with their father at Y1. First, I ensure that for each covariate in Table 1, as well as each of the 20 sample cities, treatment and control groups are balanced, or statistically indistinguishable from each other, and that this is true in each of the 25 imputed data sets (Apel and Sweeten 2010; Table A4).[9] Then, I use logit models to compare the log odds of school punishment between treatment and control groups, and the KHB method to assess the extent to which behavior problems and weakened social bonds explain group differences. The top panel shows total, direct, and indirect effects using data matched with nearest-neighbor matching. The bottom panel presents results after kernel matching (details on each method included in table notes).

The total effects for children of residential fathers presented in Table 5 are consistent with, though somewhat more conservative than, the incarceration coefficient of the full regression model presented in Table 4 panel C ($b = .680, p < .001$). The most conservative estimate suggests the odds of suspension or expulsion among children whose fathers were incarcerated between Y1 and Y5 are 75 percent greater ($e^{0.560}$) than the odds for matched control-group children ($p < .001$). Mediators are added in three separate groups before being included together. Panel A considers the mediating role of child behavior problems, including parent-reported externalizing behavior and self-reported delinquency. Results suggest a statistically significant indirect effect and that the odds of school punishment among children whose fathers were incarcerated are 15 percent higher ($e^{0.143}$ for nearest neighbor, $e^{0.139}$ for kernel) due to differences in behavior problems ($p < .05$). This suggests more than one fifth of the association between paternal incarceration and school punishment (percent of total represented by indirect effect) is explained by differences in behavior problems. Furthermore, a decomposition of this indirect effect reveals that most of it operates through self-reported delinquency by Y9 (80 percent of the

Table 5. Results of KHB Mediation after Propensity Score Matching, Showing Difference in the Log Odds of Early Suspension or Expulsion Associated with Paternal Incarceration (Children with Residential Fathers).

Mediation by Matching Method	A Mediators: Child Behavior Problems Logit (SE)	B Mediators: Weakened Family Bonds Logit (SE)	C Mediators: Weakened Employment Bonds Logit (SE)	D Mediators: All Mediators Logit (SE)
Nearest-neighbor matching				
Total effect	0.667 (0.170)***	0.586 (0.155)***	0.591 (0.155)***	0.687 (0.173)***
Direct effect	0.524 (0.168)**	0.529 (0.157)**	0.544 (0.156)**	0.461 (0.171)**
Indirect effect	0.143 (0.057)*	0.056 (0.038)	0.047 (0.024)*	0.226 (0.075)**
Percent explained	21	10	8	33
Treatment N	566	566	566	566
Control N	1,152	1,152	1,152	1,152
Kernel matching				
Total effect	0.638 (0.162)***	0.560 (0.150)***	0.565 (0.149)***	0.660 (0.164)***
Direct effect	0.499 (0.161)**	0.499 (0.154)**	0.513 (0.152)**	0.431 (0.166)**
Indirect effect	0.139 (0.056)*	0.061 (0.035)	0.052 (0.024)*	0.229 (0.073)**
Percent explained	22	11	9	35
Treatment N	566	566	566	566
Control N	1,655	1,655	1,655	1,655

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about child's experience with suspension/expulsion by Y9. Children with deceased/unknown fathers by Y5 or whose fathers were not living with them at Y1 are excluded. Observations in region outside common support are also excluded. Child behavior problems include parent-reported externalizing behaviors and self-reported delinquency. Family bonds include low father involvement, mother harsh parenting, mother and father separated, and mother repartnered. Employment bonds include mother income-to-poverty ratio and father unemployment. For nearest-neighbor matching, neighbors = 10. For kernel matching, kernel = Epanechnikov; bandwidth = .06. Results based on first of 25 imputed data sets. KHB = Karlson, Holm, and Breen (2012); SE = robust standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up survey; Y9 = nine-year follow-up survey.
*p < .05. **p < .01. ***p < .001 (two-tailed tests).

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indirect effect for nearest neighbor, 73 percent for kernel), rather than parent-reported externalizing behavior at Y5.[10]

Panels B and C include mediating variables related to weakened family and parental employment bonds, respectively. Results suggest about one tenth of the association between paternal incarceration and school punishment is accounted for by weakened family bonds, most of this driven by the parents' relationship dissolution, but the indirect effect is not statistically significant ($b = .056$ for nearest neighbor, $b = .061$ for kernel). Less than one tenth of the association appears due to weakened parental employment bonds, and this indirect effect is statistically significant ($b = .047$, $p < .05$, for nearest neighbor; and $b = .052$, $p < .05$, for kernel). Supplemental analyses reveal this indirect effect operating primarily through the mother's household income-to-poverty ratio and not the father's unemployment.

Panel D includes all mediators together. Results suggest the odds of suspension or expulsion among children whose fathers were incarcerated between Y1 and Y5 are 25 percent higher ($e^{0.226}$ for nearest neighbor, $e^{0.229}$ for kernel) due to differences in behavior problems and weakened social bonds ($p < .01$). This represents one third (33 percent for nearest neighbor, 35 percent for kernel) of the total effect or of the overall difference in odds of 75 percent mentioned previously. Supplemental analyses suggest this total indirect effect operates primarily through self-reported delinquency (51 percent of the indirect effect for nearest neighbor, 45 percent for kernel) and parent-reported externalizing behavior (11 percent for nearest neighbor, 15 percent for kernel); however, some of the indirect effect operates through social bonds even after accounting for behavior problems, particularly the parents' relationship dissolution and mother's income-to-poverty ratio.

Also, important to note is the moderately sized and statistically significant direct effect present when all mediators are included together (panel D). Results from nearest-neighbor matched data suggest the odds of school punishment among children of incarcerated fathers are 59 percent greater ($e^{0.461}$) than the odds for control-group children ($p < .01$), after accounting for behavior problems and weakened bonds. Results from kernel matched data suggest the odds of school punishment among children in this treated group are 54 percent greater ($e^{0.431}$) than the odds for control-group children ($p < .01$), again, after accounting for all of these mediating variables.

Discussion and Conclusion

In this article, I have extended cumulative disadvantage theory (Sampson and Laub 1997) to examine continuity in formal punishment across

generations or the intergenerational stability of punishment. This has involved testing the association between paternal incarceration and suspension or expulsion from elementary school, assessing whether this association is greater for children who lived with their father prior to his incarceration, and examining the extent to which differences in behavior problems and weakened social bonds explain this association.

Three key findings emerge from these analyses. First, children whose fathers were incarcerated after their first birthday and before first grade are more likely than other children to be suspended or expelled by age 9. Converting the log odds from the full logit model into predicted probabilities and holding control variables at the means, results suggest that about 16 percent of children whose fathers were incarcerated were punished in school compared to 9 percent of other children. This association is troubling given the large racial disproportionality in both incarceration and school discipline. Black children are at greater risk than Whites or Hispanics of having a father incarcerated (Sykes and Pettit 2014); they are also more likely to be suspended or expelled in elementary school (Jacobsen et al. forthcoming). Thus, it is important to consider potential implications of these findings for childhood inequality. A possible corollary of high incarceration rates is an increased prevalence of school punishment among children who are already at greater risk of experiencing it, thus perpetuating an accumulation of disadvantage.

Second, I find this association limited primarily to children who lived with their father before his incarceration. Among children not living with their father, the association appears largely driven by selection, or disadvantaged circumstances that already placed these children at greater risk of school punishment, even without paternal incarceration. These children may not be aware of their father's incarceration or their ties to him may already be weak. In contrast, the association among children of residential fathers is robust to a long list of controls, propensity score matching, and additional sensitivity checks for selection and timing of incarceration. This finding is consistent with prior research documenting negative school outcomes following residential but not nonresidential father incarceration (Turney and Haskins 2014). It is also in line with my theoretical framework, which emphasizes weakened social bonds as one of the primary mechanisms in the stability of punishment (Sampson and Laub 1997). Children of residential fathers may have more to lose by paternal incarceration—particularly when the father–child relationship is not hindered by violence or severe substance addiction (Edin et al. 2004; Turanovic, Rodriguez, and Pratt 2012; Wildeman 2010).

In line with this notion and consistent with prior research, children in my sample whose fathers were incarcerated experience more family instability (Apel 2016; Turney and Wildeman 2013). Their fathers are less involved and their mothers engage in harsher parenting (Haskins and Jacobsen 2017; Turney 2014). However, I find these differences explain less than one tenth of the association between incarceration and school punishment among children with a residential father. Moreover, in supplemental analyses, my measures of weakened social bonds explained only about one tenth of the association between paternal incarceration and child behavior problems. These findings seem inconsistent with the strong emphasis on social bonds in cumulative disadvantage theory. Future research should examine other types of bonds for which I have not accounted. For example, paternal incarceration may weaken school attachment by causing children to miss school due to court appearances or fear of embarrassment (Lageson 2016). Additional mechanisms should also be considered, such as deviant peers, traumas, and other indicators of the larger "package" of disadvantage accompanying parental incarceration (Giordano and Copp 2015; Roettger and Dennison 2018). Furthermore, researchers should attempt to measure changes in children's reflected appraisals or deviant identity following paternal incarceration (Matsueda 1992). These additional mechanisms may increase school punishment directly or by facilitating behavior problems.

Third, I find children whose fathers were incarcerated display higher levels of behavior problems than other children, and these differences partially explain the association with school punishment. Extending the concept of secondary deviance (Lemert 1951), I conceptualize behavior problems associated with paternal incarceration as intergenerational secondary deviance (Hagan and Palloni 1990). In doing so, I build on the growing body of research documenting increased physical aggression, delinquency, and other behavior problems following paternal incarceration (Haskins 2015; Mears and Siennick 2016; Roettger and Swisher 2011; Wildeman 2010). Among children who lived with their father, paternal incarceration may result in intergenerational secondary deviance and this may in turn increase children's own risk of formal punishment. Indeed, differences in behavior problems following a residential father's incarceration appear to explain more than 20 percent of the association with suspension or expulsion. Future research should consider the role of intergenerational secondary deviance in explaining higher suspension rates among racial minority youth and in disadvantaged schools where paternal incarceration is often highly concentrated (Hagan and Foster 2012).

A large part (nearly three quarters) of the association between paternal incarceration and school punishment was not accounted for by intergenerational secondary deviance. Holding behavior problems constant, I conceptualize school punishment following paternal incarceration as intergenerational secondary sanctioning. Prior research on juvenile arrest finds a first arrest associated with subsequent arrests, and this is attributed to increased surveillance more than to secondary deviance (Liberman et al. 2014). Similarly, children may experience increased scrutiny when teachers and administrators become aware of the father's incarceration history, and this may increase their risk of school punishment. However, teachers may not always be aware of the child's paternal incarceration history, and they may not need to be for intergenerational secondary sanctioning to occur. Instead, they may become aware of more visible consequences of paternal incarceration, such as the father's absence or child's poverty. These characteristics may also lead educators to consider children "at risk" and in need of heighted scrutiny, increasing risk of punishment (Ferguson 2001). This would be evident if these visible consequences accounted for some of the remaining association with school punishment, after adjusting for behavior problems. In line with this, I find weakened social bonds (primarily mother–father separation and mother poverty) and behavior problems together account for 11–13 percent more of the association with school punishment than behavior problems do alone. Still, behavior problems explain much more of the variation than social bonds do.

It is also important to emphasize that I have not tested intergenerational secondary sanctioning directly nor have I attempted to measure the stigma of paternal incarceration. However, experimental evidence among elementary school teachers suggests when educators become aware of children's parental incarceration, they expect them to exhibit more behavior problems than they would if their father was absent for another reason (Dallaire et al. 2010; Wildeman et al. 2017). To test intergenerational secondary sanctioning directly, future research may use similar methods to examine differences by paternal incarceration in the degree to which educators expect a child to be suspended or expelled, holding behavior problems constant.

Several cautions should be reiterated. Importantly, because my focus is on disadvantaged urban-born children in elementary school, my results may not be generalizable beyond this group. Future research should examine the intergenerational stability of punishment in more broadly representative samples and among children of different ages. Additionally, although my school punishment data are drawn from multiple reporters, they do not allow for examining differences by type (in school or out of school),

frequency, or duration. Future research should attempt to link official school records to survey responses to provide a richer source of data. This would minimize underestimation of the prevalence of school punishment and allow for controlling for specific incidents that resulted in punishment. Finally, my analyses are limited to observational data; I cannot rule out the possibility that results are biased by selection. Given the many disadvantages children of incarcerated parents face (Giordano and Copp 2015), there may be unobserved heterogeneity for which I have not accounted. A more rigorous approach would be within-individual regression, but this requires repeated observations of the outcome. Children in my sample were only asked about school punishment at one wave, precluding an examination of change over time. Future research should use repeated observations of both paternal incarceration and punishment in elementary school.

With these limitations in mind, my findings provide mixed support for my intergenerational extension to cumulative disadvantage theory. I find evidence of an intergenerational stability of punishment but less of the association between paternal incarceration and school punishment was explained by weakened social bonds than expected. Nevertheless, for researchers and policymakers at the intersection of schools and the justice system, my findings call for more careful assessment of the relationship between these two institutions. Not only are they linked through a "school-to-prison pipeline," in which disproportionately disadvantaged students are formally excluded from school, facilitating trajectories of delinquency and justice involvement (Bowditch 1993; Cuellar and Markowitz 2015; Mowen and Brent 2016); I find evidence that a father's incarceration is associated with his child's formal punishment in elementary school. This adds to prior research suggesting serious educational consequences of mass incarceration for already disadvantaged children (Cho 2011; Foster and Hagan 2007, 2009; Hagan and Foster 2012; Haskins 2014, 2015; Turney and Haskins 2014). In closing, by incapacitating fathers who were living with their child, the criminal justice system may be unintentionally increasing some children's risk of suspension or expulsion and continuing a cycle of punishment and exclusion among disadvantaged families.

Appendix

Table A1. Description of Control Variables (Matching Covariates).

Variable	Description
School majority Black at Y9	Coded 1 if more than 50 percent of students in school at Y9 are Black (National Center for Education Statistics data).
School majority Hispanic at Y9	Coded 1 if more than 50 percent of students in school at Y9 are Hispanic (National Center for Education Statistics data).
School majority free/ reduced-price lunch at Y9	Coded 1 if more than 50 percent of students in school at Y9 eligible for free or reduced-price lunch (National Center for Education Statistics data).
School out-of-school suspension rate at Y9	Proportion of students in school in 2009 (a small percentage in 2011) who received an out-of-school suspension (Office of Civil Rights data).
Neighborhood disadvantage	Standardized mean composite constructed from tract-level census 2000 variables (poverty rate, percentage without a bachelor's degree, occupational status reversed, percentage on public assistance, unemployment, and household income reversed) based on mother address at Y5.
Father lives with child at Y1	Coded 1 if father reports to be living with the child at least part time at Y1.
Father incarcerated by Y1	Coded 1 if the mother or father reported that the father spent time in jail or prison by Y1.
Child male	Coded 1 if child's sex at birth is reported as male.
Child non-Hispanic Black	Based on parents' self-reported race, coded 1 if either parent is non-Hispanic Black.
Child Hispanic	Based on parents' self-reported ethnicity, coded 1 if either parent is Hispanic.
Child age in months at Y5	Child's age in months at time of mother's interview.
Father age at Y0	Father's age in years in the year 2000 (based on adjusted self-reports of age at time of Y0 survey).
Mother criminal justice contact at Y3	Coded 1 if mother reports being stopped by police, booked or charged with breaking the law, or incarcerated by Y3.
Father impulsivity at Y1	Six self-reported items at Y1; some missing cases are imputed with mother or father reports about father at Y5 ($\alpha = .99$).

(continued)

Table A1. (continued)

Variable	Description
Mother impulsivity at Y3	Six self-reported items at Y3; some missing cases are imputed with mother or father reports about mother at Y5 ($\alpha = .99$).
Father substance abuse by Y1	Coded 1 if father or mother reports that father's drinking or drug use interferes with his daily activities or personal relationships at Y0 or Y1. Fathers are asked about the past year but mothers are asked about current conditions.
Mother's violence victimization by father by Y1	Coded 1 if mother reports being slapped, kicked, hit, cut, bruised, or seriously hurt by the father by Y1.
Father and mother married at Y0	Coded 1 if the mother and father are married at Y0.
Father and mother cohabiting at Y0	Coded 1 if the mother and father are cohabiting at Y0.
Mother has postsecondary schooling at Y0	Binary measure constructed from mother self-reports at Y0.
Father has postsecondary schooling at Y0	Binary measure constructed from father self-reports or mothers reports about the fathers if the father did not participate at Y0.
Either parent material hardship at Y1	Coded 1 if mother or father reported to have experienced any of 12 items taken from the Survey of Income and Program Participation.
Mother depression at Y1	Based on self-reports to the Composite International Diagnostic Interview–Short Form (liberal definition).
Either parent not a U.S. citizen	Coded 1 if either parent reports not being a U.S. citizen.
Mother lived with both parents at age 15	Coded 1 if mother reports at Y0 that she lived with both her biological parents at age 15.
Father lived with both parents at age 15	Coded 1 if father reports at Y0 that he lived with both his biological parents at age 15.
Mother religious attendance at Y0	Mother self-reports ranging from $1 =$ once a week or more to $5 =$ not at all (reverse coded).
Mother cognitive ability	Sum score for eight items from the Wechsler Adult Intelligence Scale–Revised at Y3 ($\alpha = .60$).
Father cognitive ability	Sum score for eight items from the Wechsler Adult Intelligence Scale–Revised at Y3. Some fathers were administered the test at Y1 ($\alpha = .59$).

Table A1. (continued)

Variable	Description
Child low birth weight	Coded 1 if child weighed less than 2,500 g at birth. Multiple births (less than 2 percent of analytical sample) coded as missing.
Number of children in mother household at Y1	Number of children under age 18 in mother's household at Y1.

Note. Fragile Families and Child Wellbeing Study. More information including scales documentation is available at https://fragilefamilies.princeton.edu/documentation. Y0 = baseline (birth); Y1 = one-year follow-up survey; Y3 = three-year follow-up survey; Y5 = five-year follow-up survey; Y9 = nine-year follow-up survey.

Table A2. Ordinary Least Squares Regression Showing Differences in Levels of Child Behavior Problems Associated with Paternal Incarceration.

Sample Restrictions	Parent-reported Externalizing Behavior at Y5		Self-reported Delinquency by Y9 (log)	
	Bivariate Logit (*SE*)	Add Controls Logit (*SE*)	Bivariate Logit (*SE*)	Add Controls Logit (*SE*)
Full analytic sample (N = 3,201)	.399 (.044)***	.150 (.050)**	.157 (.023)***	.067 (.026)**
Children with nonresidential fathers (n = 972)	.420 (.079)***	.137 (.092)	.146 (.040)***	.045 (.049)
Children with residential fathers (n = 2,229)	.370 (.052)***	.138 (.058)*	.150 (.028)***	.068 (.031)*

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about the child's experience with suspension/expulsion by Y9. Children with deceased/unknown fathers by Y5 are excluded. Controls include paternal incarceration by Y1, child and parent demographic and health characteristics, parents' marital status at child's birth, parent antisocial behaviors, religiosity, cognitive ability, and sample city. Results combined across 25 multiply imputed data sets. Analyses are unweighted. *SE* = standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up; Y9 = nine-year follow-up.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

Table A3. Sensitivity Test for Timing of Paternal Incarceration: Results of Logistic Regression Models Showing Difference in Log Odds of Suspension or Expulsion Associated with Paternal Incarceration (Children with Residential Fathers).

Variables	A Incarceration Logit (SE)	B Add Controls for School and Neighborhood Characteristics Logit (SE)	C Add Other Controls Logit (SE)
Main explanatory variables			
Father never incarcerated by Y5	−0.506 (0.167)**	−0.345 (0.174)*	−0.102 (0.195)
Father incarcerated by Y1 only (ref.)	— (—)	— (—)	— (—)
Father incarcerated between Y1 and Y5 only	0.690 (0.196)***	0.642 (0.205)**	0.761 (0.226)**
Father incarcerated by Y1 and between Y1 and Y5	0.641 (0.192)**	0.578 (0.200)**	0.440 (0.219)*
School and neighborhood controls			
School majority Black		0.726 (0.172)***	0.192 (0.197)
School majority Hispanic		−0.168 (0.201)	0.206 (0.261)
School majority free/reduced-price lunch		0.039 (0.183)	−0.072 (0.204)
School out-of-school suspension rate ln(sqrt + 1)		1.775 (0.569)**	1.246 (0.656)
Neighborhood disadvantage		0.351 (0.075)***	0.180 (0.087)*
N	2,229	2,229	2,229

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about the child's experience with suspension or expulsion by Y9. Children with deceased/unknown fathers by Y5 or whose fathers were not living with them at Y1 are excluded. Other controls include child and parent demographic and health characteristics, parents' marital status at child's birth, parent antisocial behaviors, religiosity, cognitive ability, and sample city. Results are combined across 25 imputed data sets; analyses unweighted. SE = standard error; Y1 = one-year follow-up survey; Y5 = five-year follow-up; Y9 = nine-year follow-up.
*p < .05. **p < .01. ***p < .001 (two-tailed tests).

Table A4. Covariate Balance before and after Propensity Score Matching.

| | Imputed Data Set = 1 | | | | | | = 2 | = 3 | = 4 | = 5 | = 24 | = 25 |
| | Unadjusted Mean | | Adjusted Mean | | | | | | | | | |
Covariate	Treated	Control	Treated	Control	SB	p	p	p	p	p	p	p
School and neighborhood covariates												
School majority Black	0.41	0.29***	0.41	0.42	-1.0	.870	.959	.988	.834	.927	.976	.881
School majority Hispanic	0.22	0.21	0.22	0.21	3.1	.609	.738	.686	.657	.663	.709	.625
School majority free/reduced-price lunch	0.77	0.59***	0.77	0.78	-2.3	.679	.799	.749	.710	.884	.820	.811
School out-of-school suspension rate	0.17	0.13***	0.17	0.17	-3.6	.554	.754	.611	.590	.632	.659	.691
Neighborhood disadvantage	0.10	-0.14***	0.10	0.11	-0.4	.952	.849	.864	.882	.953	.827	.970
Other covariates												
Father incarcerated by Y1	0.53	0.21***	0.53	0.51	4.4	.497	.484	.565	.550	.517	.587	.605
Child male	0.53	0.52	0.53	0.52	0.4	.943	.902	.979	.867	.810	.926	.660
Child non-Hispanic Black	0.60	0.43***	0.60	0.60	0.1	.992	.805	.888	.850	.948	.950	.970
Child Hispanic	0.27	0.31*	0.27	0.26	1.9	.741	.866	.723	.720	.737	.723	.776
Child age in months	61.65	61.33*	61.65	61.61	1.3	.825	.866	.661	.772	.947	.751	.849
Father age	25.64	29.30***	25.64	25.67	-0.4	.937	.971	.973	.885	.903	.968	.920
Mother criminal justice contact	0.28	0.15***	0.28	0.28	0.9	.886	.972	.825	.932	.918	.781	.806
Father impulsivity	0.18	-0.24***	0.18	0.14	4.1	.513	.444	.490	.420	.729	.542	.541
Mother impulsivity	0.22	-0.11***	0.22	0.20	1.4	.813	.930	.979	.897	.889	.978	.932
Father substance abuse	0.22	0.08***	0.22	0.21	2.2	.744	.792	.622	.639	.804	.724	.807
Mother's violence victimization by father	0.16	0.08***	0.16	0.16	0.9	.894	.960	.822	.698	.880	.957	.903
Father and mother married at Y0	0.09	0.37***	0.09	0.08	2.6	.534	.576	.570	.565	.602	.636	.589
Father and mother cohabiting at Y0	0.49	0.40***	0.49	0.49	-1.8	.762	.653	.706	.742	.692	.770	.668

(continued)

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Table A4. (continued)

| | Imputed Data Set = 1 | | | | | | = 2 | = 3 | = 4 | = 5 | = 24 | = 25 |
| | Unadjusted Mean | | Adjusted Mean | | | | | | | | | |
Covariate	Treated	Control	Treated	Control	SB	p	p	p	p	p	p	p
Mother has postsecondary schooling	0.23	0.44***	0.23	0.24	−1.4	.791	.792	.764	.808	.789	.804	.807
Father has postsecondary schooling	0.16	0.41***	0.16	0.15	1.9	.706	.779	.617	.783	.776	.668	.792
Either parent material hardship	0.70	0.47***	0.70	0.70	−0.6	.922	.877	.832	.815	.862	.872	.860
Mother depression	0.20	0.13***	0.20	0.19	2.0	.750	.775	.927	.806	.658	.842	.866
Either parent not a U.S. citizen	0.07	0.16***	0.07	0.07	0.6	.908	.910	.956	.983	.910	.958	.896
Mother lived with both parents at age 15	0.33	0.48***	0.33	0.33	0.2	.971	.927	.874	.914	.969	.964	.843
Father lived with both parents at age 15	0.33	0.52***	0.33	0.34	−3.3	.569	.480	.503	.584	.555	.525	.514
Mother religious attendance	0.17	0.24***	0.17	0.17	0.2	.972	.927	.923	.962	.893	.797	.934
Mother cognitive ability	−0.05	0.08**	−0.05	−0.03	−2.0	.729	.561	.740	.593	.714	.838	.543
Father cognitive ability	−0.10	0.04**	−0.10	−0.08	−2.4	.666	.599	.922	.782	.806	.785	.805
Child low birth weight	0.11	0.08*	0.11	0.12	−0.9	.892	.726	.998	.750	.780	.962	.894
Number of children in mother household	2.42	2.23*	2.42	2.46	−3.2	.617	.570	.720	.426	.773	.725	.708

Note. Fragile Families and Child Wellbeing Study. Sample limited to observations with nonmissing values for survey items about the child's experience with suspension or expulsion by Y9. Children with deceased/unknown fathers by Y5 or whose fathers were not living with them at Y1 are excluded. Matching conducted with kernel matching. For first of 25 multiply imputed data sets, treated $n = 566$, control $n = 1,655$. Sample-city covariates not shown. Y0 = baseline (birth); Y1 = one-year follow-up survey; Y9 = nine-year follow-up; SB = standardized bias; $p = p$ value for independent samples t test between treated and control groups. Asterisks represent statistical significance for t tests of unadjusted data.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

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Notes

1. Department of Education Office for Civil Rights out-of-school suspension data for 2013 to 2014.
2. Excludes 114 cases with deceased/unknown father by five-year follow-up survey (Y5), an additional 1,500 who did not participate in caregiver or child survey at nine-year follow-up survey (attrition), and 83 with missing incarceration data. I dropped these 83, rather than impute, to avoid sample-size variation across imputed data sets.
3. Although rare, some students are suspended/expelled before first grade, with greater risk among racial minorities. Less than 1 percent of preschoolers were suspended in 2011 to 2012 (Office for Civil Rights 2014).
4. The child-survey item about suspension/expulsion is part of this same set of questionnaire items but is not included in my measure of delinquency.

5. About 8 percent of fathers were currently incarcerated at Y5. In supplemental analyses, I controlled for current incarceration and results were similar.

6. I also checked for heterogeneity in these results by gender and race. The interaction between gender and paternal incarceration was not statistically significant, with or without controls. The interaction with race was significant (weaker association for Blacks relative to White/other race) but was rendered insignificant when controls were added.

7. I examined heterogeneity in results by father residential status by adding an interaction term to the full model in panel C of Table 2. The interaction was positive and statistically significant ($b = .115$, $p < .05$), suggesting a stronger association for children of residential compared to nonresidential fathers.

8. In this additional test, I use an alternative measure of incarceration with four categories: (1) never incarcerated by Y5, (2) incarcerated by one-year follow-up survey (Y1) only, (3) incarcerated for first time between Y1 and Y5, and (4) incarcerated by Y1 and between Y1 and Y5. Results presented in Table A3 suggest children whose residential fathers experienced their first incarceration between Y1 and Y5 had higher odds of school punishment than children of never-incarcerated fathers or children whose fathers were only incarcerated by Y1.

9. The conventional rule of thumb is a standardized bias of standardized bias (SB) < 20 (Rosenbaum and Rubin 1985). In my analyses, for each covariate across 25 imputed data sets, $SB < 8$ for nearest-neighbor matching and $SB < 6$ for kernel matching (Table A4).

10. Karlson, Holm, and Breen mediation results reported here are for the first of 25 imputed data sets. Results vary slightly across data sets, but the average percent explained by behavior problems is 19 percent (nearest-neighbor matching) and 21 percent (kernel matching). Of this indirect effect, the average portion accounted for by self-reported delinquency is 72 percent, using matched data of either method.

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