



# Mass Incarceration, Parental Imprisonment, and the Great Recession: Intergenerational Sources of Severe Deprivation in America

JOHN HAGAN AND HOLLY FOSTER

*What were the socioeconomic consequences for American youth of having a parent incarcerated during the 2008 Great Recession? We analyze a nationally representative panel study of adolescents who, when interviewed during this recession, were transitioning to and through early adulthood. Young adult children who have had a father or mother imprisoned are at increased risk of experiencing socioeconomic deprivation, including inadequate access to food. We build in this article on recent research showing that postsecondary education has become especially important in determining adult outcomes, and we demonstrate that higher educational attainment reduces intergenerational effects of parental imprisonment. The salient policy implication of this article may be the important protective role of education in reducing unprecedented risks and vulnerabilities imposed by mass parental incarceration.*

**Keywords:** mass incarceration, parental incarceration, economic insecurity, food insecurity, Great Recession

American youth transitioning through early adulthood in the first decade of the new millennium were exposed to unprecedented social and economic risks resulting from world-leading levels of parental imprisonment and the most severe economic downturn since the Great Depression. Some of the risks were foreseen and predicted when Sheldon Danziger, Sandra Danziger, and Jonathan Stern (1997,

183) wrote at the end of the last century that “America’s high child poverty rate and its negative consequences for children are likely to persist into the next century.” Of course, this prediction was made without foreknowledge of the extent of the following decade’s expansion in mass incarceration and the severity of the forthcoming Great Recession. Rather, this prediction was mainly informed by the aware-

**John Hagan** is John D. MacArthur Professor of Sociology and Law at Northwestern University and the American Bar Foundation. **Holly Foster** is associate professor of sociology at Texas A&M University.

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ness that the previous century's expansion of the welfare state had been derailed by the "Reagan revolution" and a further understanding that "starve the beast" politics was likely to follow. What was not as easily anticipated was that such politics would fail to hold back the oncoming explosive spending on prison construction and the ensuing massive growth in American imprisonment.

The children we consider in this article were born during the onset of the prison boom in the 1980s. Not only were they at elevated risk of their fathers and mothers being incarcerated, but they were also subject to the perils of entering early adulthood during the 2008 recession. The risks presented by mass incarceration before and during this recessionary era are not fully understood. Matthew Desmond and Nicol Valdez (2013) point out that in recent decades we actually have witnessed a "double movement" within the crime control field: a prison boom accompanied by greatly intensified policing, which has contributed to the population and eventual overcrowding of prisons. The recent research of Desmond (2012) and Alice Goffman (2014) identifies and explains the myriad ramifications of these crime control strategies in a new economy where human insecurity takes many forms, including the severe deprivation that is the subject of this volume.

We focus in this article on the destabilizing life circumstances and severe deprivation affecting the children of incarcerated parents in a nationally representative panel study of adolescents who were transitioning through early adulthood when interviewed before and during the 2008 recession. The damaged prospects for the young children of fathers incarcerated during the prison boom are only recently and increasingly revealed in a relatively new (Bloom 1995; Hagan and Dinovitzer 1999) and rapidly expanding research literature on parental incarceration (for example, Arditti 2012; Foster and Hagan 2007; Murray and Farrington 2008; Wakefield and Wildeman 2014).

As in many new research literatures, from the medical science of cardiovascular disease to the American sociology of socioeconomic status (Kalmijn 1994), the accumulation of findings can increase knowledge while also exposing gaps. For example, the literatures just noted both initially focused nearly exclusively

on men. The new literature on parental imprisonment similarly has tended to focus on fathers. This is consequential because imprisoned women are more often parents than are imprisoned men (Chesney-Lind and Pollock 1995), and because the rate of female incarceration, though still much lower than for men, markedly increased during the prison boom (Kruttschnitt 2010; Snell and Morton 1994). As yet, we have less understanding of the developing consequences of maternal incarceration than we do for paternal incarceration.

The parental incarceration research literature has also concentrated on *young children* and their early lives *before* the Great Recession (see, for example, Wakefield and Wildeman 2014). This is pathbreaking work, but the continuing vulnerability of these youth as they moved into early adulthood during the recent recessionary period is not yet well understood. The children of the prison boom are now increasingly represented among the young adults affected by the Great Recession. The National Longitudinal Study of Adolescent Health (Add Health) that we analyze in this article provides a unique opportunity to examine the cumulative effects of maternal and paternal incarceration on young adults who came of age during the 2008 recession.

### IMPRISONED PARENTS, SEVERE DEPRIVATION, AND THE SYSTEMIC EXCLUSION OF CHILDREN

Americans are now imprisoned about seven times more often than in the early 1970s, with two to three million Americans now serving sentences in jails and prisons. About half of these prisoners are the parents of several million children (National Research Council 2014). Susan Phillips and Barbara Bloom (1998, 539) summarize the severity of the consequences when they observe that "by getting tough on crime, the United States has gotten tough on children." The second-generation children of the first-generation fathers and mothers incarcerated in the 1970s and 1980s are now moving into and through early adulthood. These are the children of the prison generation, and many of these children in their childhood, as well as now in their early adulthood, have experienced severe forms of deprivation that involve exclusion from a range of societal insti-

tutions essential to meeting basic human needs—including schools, housing, and medical coverage (Foster and Hagan 2007).

This is the exclusionary toll for children that Jeremy Travis and Michelle Waul (2003) thematize in their aptly titled book *Prisoners Once Removed* and that Megan Comfort (2007) details in her ethnography *Doing Time Together*. We use the severe deprivation framework to analyze the acute, chronic, and compounding ways in which state and school regimes shape and structure parental incarceration effects across the life course, while leading to the systemic social exclusion of children from formative institutions and essential services (Foster and Hagan 2015b).

In the introduction to this volume, Matthew Desmond identifies three aspects of severe deprivation that are also part of the parental incarceration effects on children. First, the *acute* nature of parental incarceration effects on children is signaled by the sheer massiveness of American incarceration: today more than one million American parents are imprisoned. The *compounding* impact of parental incarceration is expressed at two levels: at the individual level, as children directly experience multidimensional forms of insecurity resulting from the imprisonment of a parent, and at the contextual level, where spillover effects radiate to include surrounding children, families, schools, and communities (Hagan and Foster 2012a, 2012b; Perkins and Sampson, this volume). The *chronic* dimension of parental incarceration stems from how early in children's lives this trauma can occur and how persistent its long-term intergenerational consequences can be. Thus, the acute, compounding, and chronic features of severe deprivation importantly identify the endangered conditions of the everyday lived experiences of the children of incarcerated parents.

Still, something more is required in conceptualizing and analyzing this form of severe deprivation as it relates to “prison-generation children.” Imprisonment is one of the most exclusionary forms of removal or banishment practiced in developed societies. For policy purposes, it is important to identify the societal agency and political responsibility involved in the imposition of this form of exclusionary deprivation. Severe deprivation may often be

the unintended consequence of public policies and practices, but the severe deprivation resulting from mass incarceration is *intended*: it is the product of *deliberate policy choices* such as determinate and mandatory minimum sentencing, prison without parole, and three-strikes laws. Identifying the collective agents and agencies responsible for systemic exclusionary deprivation can give essential policy direction to the identification of leverage points for removing its deliberately enacted origins.

A systemic social exclusion perspective recognizes and emphasizes the multiple deliberately chosen and overlapping institutional policy domains by and from which the children of incarcerated parents are excluded (Foster and Hagan 2015b). Thus, we purposefully combine the terms “systemic” and “exclusion” with “severe deprivation” to make two points: the disadvantaging outcomes found in studies of the children of incarcerated parents are products of deliberate policy choices, and these outcomes are socially reproduced in intergenerational, inter-institutional (across multiple realms such as housing, schools, and labor markets), and intersectional ways (that is, they are contingent on racial-ethnic and gender domains). Unlike a focus on poverty per se, a focus on systemic exclusion resulting in severe deprivation is explicitly multidimensional and reveals disconnection from multiple societal institutions.

A systemic social exclusion framework locates state punishment and policy regimes (Beckett and Western 2001; Esping-Anderson 1990) as formative contexts for linked lives that shape an array of social inequalities in lived experiences—from childhood through adulthood—across realms of social, cultural, political, and economic development. Succinctly said, systemic social exclusion is the structural condition of being “shut out” from conventional society (Micklewright 2002). Recent work on systemic exclusion has examined parental incarceration effects on powerlessness, earnings, perceived socioeconomic standing, and financial, housing, and food insecurity (Foster and Hagan 2015a). Indicators of systemic social exclusion widen our focus to broadly include institutional disconnections from the civic, cultural, social, and economic realms, as well as the subjectively perceived so-

cial exclusion (for example, feelings of being “left out of society”) explored in new European research (Bohnke 2006; Silver 2007).

Social exclusion has been used to conceptualize groundbreaking research on the disconnection of adult prisoners from society (Travis 2002, 19). Research on the collateral consequences of imprisonment reveals social exclusion from occupational, familial, and political life (Manza and Uggen 2006; Pager 2007; Pettit and Western 2004; Western 2006). Becky Pettit (2012) emphasizes the unique systemic exclusion of incarcerated African American males from data collection, including important government databases. Young African American males are in this way often invisible to social science and public policy. As a result, spillover effects of imprisonment have spread across the lives of their families (Comfort 2007; Kamerman and Kahn 2002) in a range of exclusionary ways that we are only beginning to understand (Foster and Hagan 2007, 2015a, 2015b; Murray 2007).

Ajit Bhalla and Frederic Lapeyre (1997, 417) use social exclusion to conceptually broaden attention to the social relational as well as economic distributional aspects of severe deprivation. They do this by emphasizing how the distributional dimension of poverty drives the opportunities to achieve what Amartya Sen (1992, 110) calls the “functionings” made up of “beings and doings,” such as “taking part in the life of the community, being able to appear in public without shame, and so on.” The point is that adequate levels of inclusionary access to social and economic institutions and resources are a necessary though not sufficient means of meeting basic human needs. From this perspective, exclusion is a denial of fundamental rights and liberties granted and therefore presumably protected by the state. A developed state fails to fulfill its responsibilities when instead of protecting vulnerable groups—such as the innocent children of incarcerated parents—it discriminates between insiders and outsiders and excludes some disadvantaged groups of citizens while advantaging others who are included.

We hypothesize in this article that education plays a pivotal mediating role in the socioeconomic process that connects the incarceration

of parents to the social exclusion of their emerging adult children. Patrick Wightman and Sheldon Danziger (2014) point out that access to public education is like other civil rights in American society in that it has expanded only fitfully across the social spectrum. They note that in the recent history of American education, the funding of public schools with local property taxes has greatly advantaged children living in prosperous communities as contrasted with poor communities. Perhaps the most notable effort to compensate for the resulting community-level disparities were the War on Poverty programs initiated in the 1960s and 1970s, including Head Start and other federal subsidies for primary, secondary, and postsecondary education.

Yet disparities in accessing and completing college persist, and the negative impact of the prison boom on schools in poorer neighborhoods and communities (Hagan and Foster 2012a, 2012b) counteracts the compensatory efforts that continue in these settings. President Obama in his 2015 State of the Union Address called for vastly increasing access to postsecondary education in America. Wightman and Danziger (2014, 23) explain that disparities in educational outcomes are especially likely at the college level, because going to college requires tuition payments, while going to high school is publicly funded. They observe that disparities in college outcomes are especially likely in an era of declining inflation-adjusted earnings among low-income parents, with the result that “the ratio of college costs to parental income has increased much more for young adults from low-SES than from high-SES families. Many poor young adults may perceive (rightly or wrongly) that college is not a financially feasible option. In addition, government spending on college subsidies for children from low-SES families has not risen as fast as college costs.” We hypothesize that, as a result, restricted postsecondary educational attainment is an important mediating mechanism through which maternal and paternal incarceration leads to severe deprivation and the social exclusion of children in ways that will almost certainly have effects throughout their adult lives.

The ultimate focus of this article is on the loss of rights of access among these older children of incarcerated parents to the most basic requirements for systemic inclusion in conventional society, such as rent or mortgage money, phone service, utilities, and even food—the essential economic resources required to be free of housing and hunger insecurity in America. Recent national estimates (Houseman 2003) of severely deprived and disconnected youth ages sixteen to twenty-four in American society range from 8 to 15 percent. The purpose of this article is to examine the likely role of the mass incarceration of parents during the recent economic recession in explaining the deprivation, disconnection, and broader social exclusion of these children as they transition into and through early adulthood.

### SELECTION AND SELF-CONTROL

It is important in assessing severe deprivation and systemic exclusion to also consider related and alternative perspectives on selection and self-control. These perspectives emphasize that exogenous selection processes render imprisoned parents and their children different from parents and children who are not imprisoned. Thus, Daniel Nagin and Raymond Paternoster (1991, 167) juxtapose a state dependency theory with this kind of population heterogeneity perspective. They observe that individuals selected for imprisonment would be characterized by Michael Gottfredson and Travis Hirschi (1990) as having low self-control, by James Wilson and Richard Herrnstein (1985) as having high impulsivity and low conscience, and by some criminologists as having a propensity for criminal offending resulting from low conditionability (Fishbein 1990). As Robert Sampson and John Laub (1997) remind us, and as we reemphasize later, these individual differences may derive from and lead to a mixture of factors. Regardless, these perspectives speak to the traditional American concern about failures of personal responsibility in accounting for social exclusion.

The most comprehensive explanation of a self-control theory of selection is Gottfredson and Hirschi's *A General Theory of Crime* (1990). Their point is that a stable and versatile range of exclusionary outcomes, which in their view

would include economic deprivation and human insecurity, are the product of a common cause—namely, low self-control—and resulting processes of self-selection. Their selection hypothesis is simply that “people with low self-control sort themselves and are sorted in a variety of circumstances” (Gottfredson and Hirschi 1990, 119).

Past work (for example, Hagan and Palloni 1990; Nagin and Paternoster 1991) has sought to take this kind of “characterological” theory of selection into account by statistically modeling selection processes using specific assumptions about distributions in the unmeasured heterogeneity of individual background conditions and the structural forms of state dependence. Gottfredson and Hirschi (1990) propose a more direct measurement approach that, when applied to the study of crime, seems to risk circularity by positing crime as its own best explanation. They assert that “the fact that crime is by all odds the major predictor of crime is central to our theory. It tells us that criminality (low self-control) is a unitary phenomenon that absorbs its causes such that it becomes for all intents and purposes, *the* individual-level cause of crime” (Gottfredson and Hirschi 1990, 232, emphasis in the original).

Since in contrast with Gottfredson and Hirschi our concern is with noncriminal forms of social exclusion (economic deprivation and human insecurity), it does not pose a problem of circularity for us to use repeated measures of arrests as indicators of weak self-control and as one part of a methodologically conservative consideration of self-selection. We are further able to take advantage of Gottfredson and Hirschi's assertion that many other events and behaviors are unitary expressions of weak self-control. In particular, we include as further measures of low self-control and population heterogeneity indications of parents' alcoholism, parents' weak social bonds to their children, and parents' low educational achievement. Holding these influences constant allows us to more narrowly assess the independent effects of mothers' and fathers' imprisonment and the cumulative mechanisms—especially their children's educational achievement—that transmit the effects of pa-

rental imprisonment on the deprivation, insecurity, and broader social exclusion of their emerging adult children.

## **DATA AND METHODS FOR STUDYING THE MASS INCARCERATION AND GREAT RECESSION GENERATIONS**

### **Parameters of the Study**

Assessment of the historic impact on the deprivation and insecurity of children transitioning into and through early adulthood of the explosion in parental incarceration during the prison boom and the Great Recession requires knowledge of when these events occurred and, ideally, longitudinal data on child cohorts that appropriately coincide with the unfolding of these events. The prison boom started in the 1970s, began its steep ascent in the 1980s, and reached its approximate peak by the end of the first decade of the new millennium. The Great Recession was sparked by the U.S. subprime mortgage crisis and the ensuing financial crisis that began in 2007. International Monetary Fund (IMF) gross domestic product (GDP) figures place the onset of the Great Recession at the middle of 2008.

### **The National Longitudinal Study of Adolescent Health**

Pettit (2010, 90) observes that the inadequate enumeration of and explanation for the effects of mass incarceration policies by social scientists and policy analysts has contributed to our “collective blindness” about the effects of high U.S. rates of imprisonment. This may be simultaneously true of the Great Recession. However, Pettit (2010, 87) also notes that an important exception to this generalization is the data collected in the ongoing National Longitudinal Study of Adolescent Health (Add Health). The Add Health panel study has not only tracked respondents over time and inquired about parent incarceration but also measured important intergenerational family, school, and work experiences that prior research on educational attainment and economic deprivation has identified as important.

Add Health thus provides a well-timed and nationally representative sample of the incarceration and recession generations who were born in the early 1980s, entered adulthood (at

average age twenty-one) about the turn of the millennium, and were transitioning through early adulthood (ranging in age from twenty-four to thirty-two, with an average age of twenty-eight) when the Great Recession began in mid-2008. Add Health began in 1995 by sampling grades seven to twelve in 132 U.S. schools (Chantala and Tabor 2010 [1999]; Udry and Bearman 1998; see also Resnick et al. 1997).

The inception of the Add Health survey in 1995 is propitious for our purposes in that Katherine Beckett and Bruce Western (2001, 52) have demonstrated the emergence of a strong negative relationship between welfare support and penal punitiveness at approximately this time. Add Health parents participated in one wave of data collection, and students participated in four waves. The fourth-wave interviews occurred between 2007 and 2009, with about 1 percent of the interviews completed in 2007 and over 99 percent before the end of 2008. We consider the effects of the onset and unfolding of the recession in 2008 with a count measure of days from January 1, 1960, until the fourth-wave Add Health interview.

### **Key Independent and Dependent Add Health Variables**

Add Health respondents were asked in waves 3 (2002, 77.3 percent response rate) and 4 (2008, 80.3 percent response rate) to report retrospectively on parental imprisonment. As we note later, the four waves of Add Health provide a valuable moving window on incarcerated parents and their backgrounds, adolescents’ backgrounds, their educational attainments, their familial and legal circumstances, and their experiences of economic deprivation and human insecurity. These moving measures are summarized in table 1 and described more fully in the appendix, including individual-level indicators of deprivation and insecurity (the key outcomes analyzed in this article): the wave 3 and 4 scale measures of not being able to pay phone, rent/mortgage, or utility bills and, in the final wave, being unable to buy food (alpha = 0.64–0.72). As indicated in figure 1, from 20 to 40 percent of young adult children of incarcerated mothers or fathers had experienced one or more of these sources of deprivation and insecurity. Figure 2 indicates that 10 to 20

**Table 1.** Descriptive Statistics for Young Adults with an Incarcerated Parent During the Great Recession

	Mean	Standard Deviation	Range	N	Means Produced with Multiple Imputation (n = 9,401)
<b>Young adult income insecurity</b>					
Economic insecurity, wave 4	0.36	0.83	0-4	9,401	0.36
Economic insecurity, wave 3	0.40	0.83	0-4	9,305	0.40
Food insecurity, wave 4	0.11	—	0-1	9,415	0.11
Any economic insecurity <sup>a</sup> (5), wave 4	0.24	—	0-1	9,401	0.24
Any economic insecurity, wave 4	0.20	—	0-1	9,401	0.21
Any economic insecurity, wave 3	0.24	—	0-1	9,305	0.25
<b>Parental imprisonment</b>					
Paternal imprisonment, wave 4	0.15	—	0-1	8,885	0.16
Paternal imprisonment, wave 3	0.14	—	0-1	8,831	—
Maternal imprisonment, wave 4	0.03	—	0-1	9,328	0.03
<b>Young adult sociodemographics</b>					
Hispanic	0.11	—	0-1	9,406	0.12
African American	0.16	—	0-1	9,406	0.16
White (reference)	0.66	—	0-1	9,406	—
Asian American	0.04	—	0-1	9,406	0.04
Other	0.03	—	0-1	9,406	0.03
Gender (female = 1)	0.50	—	0-1	9,421	0.50
Age, wave 4	27.89	1.67	24-34	9,416	27.88
Parent welfare receipt, wave 1	0.09	—	0-1	8,353	0.09
Lived in single-parent family, wave 1	0.23	—	0-1	9,421	0.23
Interview date, wave 4 (number of days since January 1, 1960)	17,660.68	93.98	17,259- 17,929 (April 3, 2007, to February 1, 2009)	9,421	17,660.65
Log personal income, wave 3	8.57	2.14	0-12.43	8,601	8.57
Number of moves 1995 to 2001-2002	1.96	2.08	0-10	9,354	1.96
<b>Young adult life circumstances</b>					
College degree, wave 4	0.31	—	0-1	9,419	0.31
Bachelor's degree, wave 3	0.08	—	0-1	9,417	0.08
Ever fired or laid off, 2001 to wave 4	0.51	1.43	0-50	9,152	0.55
Ever married, wave 4	0.47	—	0-1	9,410	0.47
Ever married, wave 3	0.16	—	0-1	9,410	0.16
Ever arrested, wave 4	0.29	—	0-1	9,363	0.29
Ever arrested, wave 3	0.12	—	0-1	9,366	0.12

**Table 1.** (continued)

	Mean	Standard Deviation	Range	N	Means Produced with Multiple Imputation (n = 9,401)
Number of children, wave 4	0.87	1.12	0-7	9,378	0.87
Live alone, wave 3	0.08	—	0-1	8,905	—
Live alone, wave 4	0.11	—	0-1	9,339	—
Resident children, wave 3	0.30	0.66	0-5	8,852	—
Resident children, wave 4	0.84	1.11	0-7	9,330	—
Any resident parenting, wave 3	0.22	—	0-1	8,852	—
Any resident parenting, wave 4	0.45	—	0-1	9,330	—
<b>Differences in life circumstances</b>					
Differences in paternal imprisonment	0.05	—	0-1	8,122	—
Differences in paternal imprisonment <sup>a</sup>	0.003	0.31	-1-1	8,508	—
Differences in bachelor's degree	0.24	—	0-1	9,399	—
Differences in bachelor's degree <sup>a</sup>	0.24	0.43	-1-1	9,415	—
Differences in having been married	0.31	—	0-1	9,321	—
Differences in having been married <sup>a</sup>	0.31	0.47	-1-1	9,399	—
Differences in having been arrested	0.18	—	0-1	9,144	—
Differences in having been arrested <sup>a</sup>	0.16	0.14	-1-1	9,338	—
Differences in living alone	0.09	—	0-1	8,279	—
Differences in living alone <sup>a</sup>	0.03	0.39	-1-1	8,832	—
Differences in residential parenting	0.28	—	0-1	8,598	—
Differences in residential parenting <sup>a</sup>	0.25	0.48	-1-1	8,772	—
Differences in residential parenting <sup>b</sup>	0.57	0.92	-4-6	8,772	—
<b>Other parental characteristics</b>					
Biological father's alcoholism, wave 1	0.16	—	0-1	7,746	0.16
Biological father's education	5.38	2.40	1-9	8,348	5.27
Closeness to biological father	4.21	1.26	1-5	7,318	4.15
Biological father smokes	0.64	—	0-1	7,513	0.64
Biological mother's alcoholism, wave 1	0.03	—	0-1	8,240	0.03

(continued)



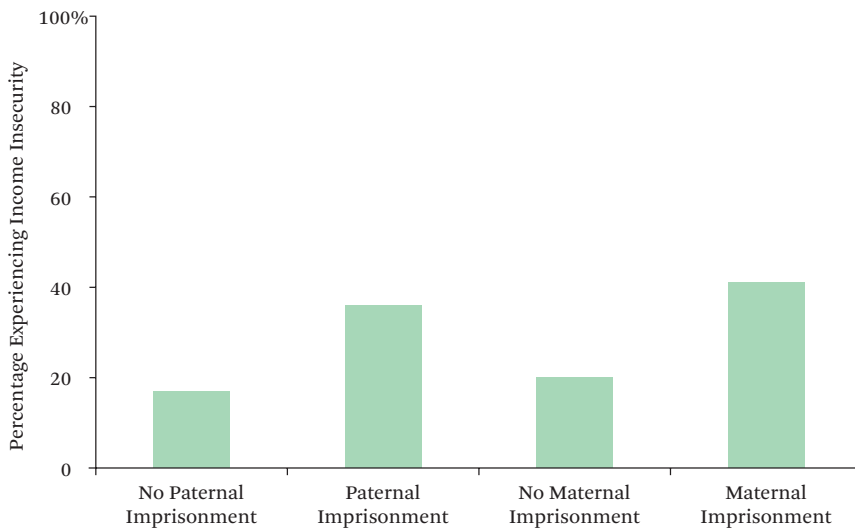
**Table 1.** (continued)

	Mean	Standard Deviation	Range	<i>N</i>	Means Produced with Multiple Imputation ( <i>n</i> = 9,401)
Biological mother's education	5.32	2.31	1-9	8,109	5.30
Closeness to biological mother	4.49	—	0-1	8,362	4.49
Biological mother smokes	0.52	—	0-1	8,323	0.52

Source: National Longitudinal Study of Adolescent Health (Add Health), 1994/1995–2007/2008.

<sup>a</sup> Indicates alternate form of measure used (for example, any economic insecurity at wave 4 with the superscript is a dichotomized version of the five-item economic insecurity measure inclusive of food insecurity at wave 4).

<sup>b</sup> There are three forms of the measure of resident parenthood used. The form of the measure with superscript b is the second alternative operationalization.

**Figure 1.** Percentage of Young Adults Experiencing Any of Four Types of Income Insecurity in 2007–2008

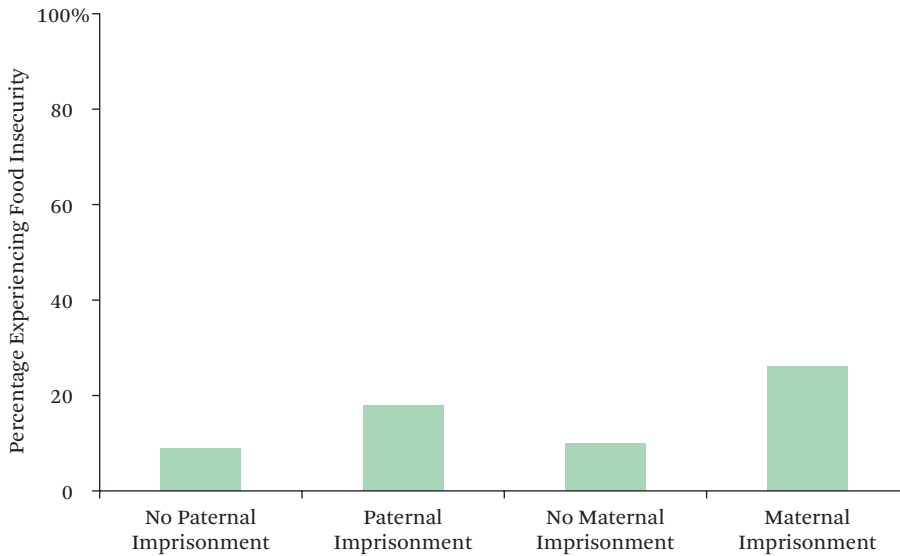
Source: Add Health, 2007–2008.

Note: The four types of economic insecurity include being unable to pay utility bills, being without a phone, being unable to pay the rent or mortgage, and being without utilities.

percent of these young adults had been unable to buy food.

The key independent variables in our analysis are father's and mother's incarceration. From 14 to 15 percent of the sampled youth reported that their biological father "had

served time in jail or prison" in waves 3 and 4, while 3 percent reported that their mother, as measured in wave 4, had been incarcerated. In wave 4, nearly 3,000 members ( $n = 2,926$ ) of the cohort retrospectively reported having mothers and fathers who had been incarcerated.

**Figure 2.** Percentage of Young Adults Experiencing Food Insecurity in 2007–2008

Source: Add Health, 2007–2008.

Retrospective survey items have been effectively used to re-create cohorts' experiences of fertility, social mobility, and other salient behavioral events such as parental incarceration (Hagan and Palloni 1988; Palloni and Sørensen 1990). Add Health youth reported paternal incarceration reliably in waves 3 and 4: the correlation across waves in reported incarceration is 0.82 ( $p < 0.001$ , with new onset cases excluded in wave 4).

### Theoretical and Control Variables

The additional theoretical and standard young adult sociodemographic control variables are detailed in the appendix. The latter control variables include self-reported and dummy-coded respondent race-ethnicity (Hispanic, African American, white, Asian American, "other" as omitted comparison), gender (female = 1), and age (in years). Family status is measured at wave 1 as receiving welfare (yes = 1) and living in a single-parent family (yes = 1). As noted earlier, exposure to the 2008 recession is measured as the date of the interview minus January 1960. Personal total income is logged for 2000–2001 in late adolescence. Residential mobility is a reported count from 1995 to 2001–2002.

We have argued that a key mediating variable determining economic deprivation and human insecurity outcomes is educational attainment by early adulthood, which is measured in waves 3 and 4 as attaining a bachelor's degree or higher. However, drawing from the literature on the importance of local life circumstances (Horney, Osgood, and Marshall 1995), we include a number of additional young adult self-reported indices at waves 3 and 4, including having ever been married (yes = 1), having ever been arrested (yes = 1), and number of children at wave 4 (count). Given the salience of early research on family structure for food insecurity, followed by the mixed effects of family structure (Miller et al. 2014), we further attend to adulthood family circumstances as part of the foreground of potential influences.

Five measures of the biological father's and mother's backgrounds are also controlled: mother's and father's alcoholism, mother's and father's education, mother's and father's smoking, the parent-child social bond, and mother's or father's absence from the home. The controls for father's and mother's education, family structure in adolescence, and welfare receipt in adolescence are especially important to our focus on young adult children's educational attainment and family circum-

stances as potential mediating variables in our analysis of their early adult economic deprivation and insecurity.

### Methods

We use multiple imputation (MI) techniques for missing data (MI procedures in Stata using twenty multiply imputed data sets) to work with all cases with nonmissing information on our focal dependent variables ( $n = 9,401$ ) that also have valid wave 4 sampling weights. The multivariate analyses initially presented in this article use survey-adjusted logistic and negative binomial regression equations to estimate direct and indirect effects of mothers' and fathers' imprisonment on economic outcomes. We believe this multivariate approach is persuasive because of the range of co-occurring factors and prior-wave economic outcomes that may be spuriously conflated with parental incarceration. Of course, one can never be certain that all relevant variables have been considered, but a comprehensive range of alternative causal factors are included and available for analysis in the relevant waves of the Add Health survey.

In addition, we take special advantage of the cross-wave repeated measurement of a number of key variables in the third and fourth waves of the Add Health survey, most notably father's imprisonment. These measures can be used to estimate a final set of fixed-effects models, or within-person difference models, as contrasted with the previous cross-person models. We use fixed-effects logistic regression models for the two-period case (Allison 2009). These models allow us to compare child economic outcomes and life circumstances between entry into adulthood in the third wave of the Add Health survey and six years later during early adulthood in the fourth wave.

We modeled differences within person across waves in obtaining a bachelor's degree, in having been married, in having been arrested, in residential parenthood, and in living alone. The unique advantage of these final fixed-effects models is that they control for time-invariant unobservable factors that may be related to selection into paternal imprisonment (Allison 2009). Thus, the fixed-effects models help to address competing explanations of the relationship between the father's incarceration and the child's adult economic

insecurity by ruling out time-invariant sources of unobserved heterogeneity.

The findings of our final fixed-effects models parallel our findings in the earlier regression models and therefore boost our confidence in our results. In the two period-case fixed-effects regression models, we regress economic insecurity at wave 4 on difference scores in the time-varying independent variables between waves 3 and 4. Sample sizes are restricted in fixed-effects logistic regression models, with cases excluded if they have the same value of the outcome variable in both waves 3 and 4, indicating no change in status (Allison 2009, 29).

### MULTIVARIATE RESULTS

The first logistic regression equation estimated in table 2 indicates that both father's and mother's imprisonment are strongly and significantly related to one or more of the five measures of early adult economic deprivation (inability to pay for phone, rent, mortgage, utilities, or food). This continues to be the case in the second equation, which, since food insecurity was measured at wave 4 only, introduces a four-item economic deprivation measure from the prior wave. When the eight father and mother controls (for alcoholism, smoking, education, and parent-child bond) are added in the third equation of table 2, the effects of father's and mother's imprisonment are reduced by about one-third, but both parental imprisonment effects remain highly significant.

The fourth equation further includes the duration of the recession (indicated by the interview date) and sociodemographic characteristics. The results indicate the significant impact of the recession and of having a single parent, being a woman, and having African American or "other" (non-Hispanic) minority status on forms of economic insecurity, as well as the significant mitigating effect of being Asian American. Still, the effects of maternal and paternal imprisonment remain statically significant.

Finally, the fifth equation incorporates second-generation child attainment of a bachelor's degree as well as ever having been married, ever having been arrested, number of children, and having been fired, laid off, or let go. The last column in table 2 presents the ex-

**Table 2.** Survey-Adjusted Logistic Regression of Any Economic Insecurity<sup>a</sup> at Wave 4 on Paternal and Maternal Imprisonment and Predictors

	1	2	3	4	5	6 (Odds Ratio)
<b>Parental imprisonment</b>						
Biological father's imprisonment	0.86*** (0.07)	0.78*** (0.08)	0.49*** (0.09)	0.44*** (0.09)	0.35*** (0.10)	1.42***
Biological mother's imprisonment	0.93*** (0.16)	0.86*** (0.17)	0.59*** (0.17)	0.53** (0.17)	0.47** (0.17)	1.59**
<b>Controls</b>						
Binary economic insecurity, wave 3		0.97*** (0.07)	0.87*** (0.07)	0.81*** (0.07)	0.69*** (0.07)	2.00***
Biological father's alcoholism			0.14 (0.12)	0.12 (0.12)	0.05 (0.13)	1.05
Biological father's education			-0.07*** (0.02)	-0.07*** (0.02)	-0.03 (0.02)	0.97
Bond to biological father			-0.09** (0.03)	-0.03 (0.03)	0.00 (0.03)	1.00
Biological father smokes			0.20* (0.09)	0.20* (0.09)	0.16+ (0.09)	1.17*
Biological mother's alcoholism			0.21 (0.21)	0.14 (0.20)	0.07 (0.20)	1.07
Biological mother's education			-0.03 (0.02)	-0.03 (0.02)	0.02 (0.02)	1.02
Bond to biological mother			-0.09* (0.04)	-0.11* (0.05)	-0.08+ (0.05)	0.92+
Biological mother smokes			0.25** (0.08)	0.24** (0.08)	0.16+ (0.08)	1.17+
Interview date, wave 4				0.0009* (0.0004)	0.0006+ (0.0004)	1.0001+
Gender (female = 1)				0.23*** (0.06)	0.39*** (0.07)	1.48***
Hispanic				-0.12 (0.13)	-0.14 (0.12)	0.87
African American				0.33*** (0.09)	0.10 (0.09)	1.10
Asian American				-0.70** (0.22)	-0.59* (0.24)	0.55*
Other				0.38* (0.19)	0.27 (0.18)	1.37
Age				-0.02 (0.03)	-0.03 (0.03)	0.97
Lived in single-parent family, wave 1				0.30** (0.09)	0.27** (0.09)	1.32**
Parent received welfare, wave 1				0.14 (0.11)	0.03 (0.12)	1.03
Personal income, wave 3				-0.03+ (0.02)	-0.04* (0.02)	0.96*
Number of residential moves 1995 to 2001–2002				0.04* (0.02)	0.04* (0.02)	1.04*

(continued)

**Table 2.** (continued)

	1	2	3	4	5	6 (Odds Ratio)
<b>Young adult life circumstances</b>						
Bachelor's degree, wave 4					-0.95*** (0.10)	0.39***
Ever married, wave 4					-0.31*** (0.08)	0.72***
Ever arrested, wave 4					0.35*** (0.08)	1.42***
Number of children, wave 4					0.27*** (0.03)	1.32***
Ever fired or laid off, before wave 4					0.13*** (0.04)	1.14***
Constant	-1.34*** (0.04)	-1.61*** (0.05)	-.53* (0.26)	-16.06** (6.14)	-11.44+ (6.28)	
Adjusted Wald statistic	88.50***	102.64***	34.56***	24.56***	39.93***	

Source: Add Health, 1994/1995–2007/2008.

Note:  $N = 9,401$  Coefficient (b)/ Standard Error (sb).

<sup>a</sup>Outcome measure is the dichotomized version of the five item version of economic insecurity measure (includes food insecurity).

+ $p < 0.1$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed tests)

ponentiated logistic regression coefficients, or odds ratios, for the fifth equation and confirms that child attainment of a bachelor's degree has among the strongest and most significant of the effects mediating the influence of parental imprisonment. Attaining a bachelor's degree reduces the probability of experiencing any of the measured economic deprivations by nearly two-thirds. However, in support of a local life circumstances perspective, marriage reduces the odds of economic insecurity in adulthood, while having more children and having been arrested increases these odds. Having been fired or laid off increases the odds of experiencing any economic insecurity at wave 4. Thus, family, legal, and labor market status matter in adulthood for changes in economic insecurity. Yet even with the full range of independent variables taken into account, the early adult children in the Add Health sample with a father imprisoned are estimated to be 42 percent more likely to experience one or more of the measured economic deprivations—and 59 percent more likely to experience economic insecurity with a mother imprisoned.

The same pattern of results is revealed in table 3 when a negative binomial regression is

used to estimate effects with a five-item additive scale. Thus, whether a binary or additive scale of economic early adult deprivation is used, and notwithstanding comprehensive inclusion of control measures, the effects of maternal and paternal imprisonment remain highly significant. Furthermore, child educational attainment in the form of the absence of a bachelor's degree is also clearly shown to be an important mediator of these parental imprisonment effects. Additionally, we see the salience of overall local life circumstances in mediating the effects of parental imprisonment: having been married reduces economic insecurity, ever having been arrested increases economic insecurity, having more children increases economic insecurity, and having been fired or laid off increases economic insecurity.

We next examine food insecurity, which was uniquely measured in wave 4 of the Add Health study. The inability to pay for food is an especially telling form of economic deprivation in a developed society. Again there is evidence that notwithstanding the comprehensive inclusion of control measures, both maternal and paternal imprisonment make it more likely that children will be less likely in early adulthood to be

**Table 3.** Survey-Adjusted Negative Binomial Regression of Economic Insecurity<sup>a</sup> at Wave 4 on Paternal and Maternal Imprisonment and Predictors

	1	2	3	4	5
<b>Parental imprisonment</b>					
Biological father's imprisonment	0.65*** (0.06)	0.57*** (0.06)	0.35*** (0.06)	0.34*** (0.07)	0.29*** (0.07)
Biological mother's imprisonment	0.76*** (0.13)	0.68*** (0.12)	0.47*** (0.12)	0.43*** (0.12)	0.37*** (0.12)
<b>Controls</b>					
Economic insecurity, wave 3		0.44*** (0.03)	0.39*** (0.03)	0.36*** (0.03)	0.28*** (0.03)
Biological father's alcoholism			0.07 (0.10)	0.06 (0.10)	0.03 (0.10)
Biological father's education			-0.07*** (0.02)	-0.07*** (0.02)	-0.04* (0.02)
Bond to biological father			-0.07** (0.02)	-0.04 (0.03)	-0.02 (0.03)
Biological father smokes			0.12 (0.08)	0.11 (0.08)	0.09 (0.08)
Biological mother's alcoholism			0.15 (0.14)	0.09 (0.14)	0.01 (0.13)
Biological mother's education			-0.03 (0.02)	-0.03 (0.02)	0.02 (0.02)
Bond to biological mother			-0.05 (0.04)	-0.06 (0.04)	-0.04 (0.04)
Biological mother smokes			0.24*** (0.07)	0.23** (0.07)	0.14* (0.07)
<b>Young adult sociodemographics</b>					
Interview date, wave 4				0.001** (0.0003)	0.0008* (0.0003)
Gender (female = 1)				0.17** (0.06)	0.31*** (0.06)
Hispanic				-0.18 (0.11)	-0.21+ (0.11)
African American				0.28*** (0.07)	0.11 (0.08)
Asian American				-0.40 (0.24)	-0.25 (0.27)
Other				0.27+ (0.15)	0.10 (0.15)
Age				0.01 (0.02)	-0.00 (0.02)
Lived in single-parent family, wave 1				0.08 (0.07)	0.09 (0.07)
Parent received welfare, wave 1				0.11 (0.08)	0.02 (0.08)
Personal income, wave 3				-0.03+ (0.02)	-0.03* (0.01)
Number of residential moves 1995 to 2001-2002				0.02 (0.01)	0.02 (0.01)

*(continued)*

**Table 3.** (continued)

	1	2	3	4	5
<b>Young adult life circumstances</b>					
College degree, wave 4					-0.84*** (0.10)
Ever married, wave 4					-0.19* (0.08)
Ever arrested, wave 4					0.25*** (0.07)
Number of children, wave 4					0.20*** (0.02)
Ever fired or laid off, before wave 4					0.13*** (0.03)
Constant	-0.93*** (0.04)	-1.16*** (0.04)	-0.31 (0.22)	-17.57** (5.42)	-15.21** (5.60)
Log of alpha	1.13 (0.06)	0.97 (0.07)	0.89 (0.07)	0.84 (0.07)	0.63 (0.07)
Alpha	3.11 (0.19)	2.63 (0.18)	2.42 (0.17)	2.31 (0.17)	1.88 (0.13)
Adjusted Wald statistic	81.91***	110.00***	39.60***	27.98***	33.37***

Source: Add Health, 1994/1995–2007/2008.

Note:  $N = 9,401$  Coefficient (b)/ Standard Error (sb).

<sup>a</sup>Five-item economic insecurity measure.

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < .01$ ; \*\*\*\* $p < .001$  (two-tailed tests)

able to afford to pay for food. However, while the effect of paternal imprisonment on the ability to afford food is statistically significant at the 0.10 level, the effect of maternal imprisonment on food insecurity is stronger and statistically significant at the 0.01 level (see table 4). Exponentiation of the logistic regression coefficient indicates that when a mother is imprisoned, the likelihood of experiencing the inability to pay for food is increased by 81 percent. Again, these background effects are partly working through foreground local life circumstances to influence food insecurity experiences.

The equations estimated in the survey-adjusted logistic regression analyses of experiencing any of five forms of income insecurity and experiencing food insecurity are used to generate exponentiated odds ratios and adjusted odds ratios in figure 3. Thus, the odds presented in the bars on the left-hand side of figure 3 estimate without controls for other independent variables the likelihood of the child of an incarcerated father or mother experiencing any income insecurity or food insecurity,

while the odds presented in the bars on the right-hand side estimate these maternal and paternal effects, net of all other independent variables in the equation. The bars in figure 3 thus indicate that without taking other variables into account, the likelihoods of income insecurity and food insecurity are elevated from about 100 to 150 percent among children with incarcerated fathers or mothers. When the range of potentially confounding variables, such as father, mother, or child attainment of a bachelor's degree, are taken into account, the effect of parental incarceration remains large—from 25 to 75 percent. The last more pronounced effect is the estimated impact of maternal incarceration on food insecurity.

Finally, table 5 presents the more stringent fixed-effects assessment of the effects of maternal and paternal imprisonment on economic insecurity. Economic insecurity at both waves 3 and 4 in these analyses is measured with four items included at both waves, while a dichotomous indicator is used to measure any economic insecurity at each wave.

**Table 4.** Survey-Adjusted Logistic Regression of Food Insecurity at Wave 4 on Paternal and Maternal Imprisonment and Predictors

	1	2	3	4	5	6 (Odds Ratio)
<b>Parental imprisonment</b>						
Biological father's imprisonment	0.69*** (0.10)	0.58*** (0.11)	0.31* (0.12)	0.31* (0.12)	0.23+ (0.12)	1.26+
Biological mother's imprisonment	0.96*** (0.20)	0.89*** (0.20)	0.68** (0.21)	0.65** (0.21)	0.59** (0.22)	1.81**
<b>Controls</b>						
Economic insecurity, wave 3		0.48*** (0.04)	0.43*** (0.04)	0.41*** (0.05)	0.34*** (0.04)	1.40***
Biological father's alcoholism			0.19 (0.15)	0.17 (0.14)	0.10 (0.15)	1.10
Biological father's education			-0.04+ (0.02)	-0.04 (0.03)	-0.01 (0.03)	0.99
Bond to biological father			-0.08+ (0.04)	-0.05 (0.05)	-0.03 (0.05)	0.97
Biological father smokes			0.19 (0.13)	0.18 (0.13)	0.14 (0.13)	1.15
Biological mother's alcoholism			0.07 (0.25)	-0.00 (0.24)	-0.08 (0.24)	0.93
Biological mother's education			-0.07** (0.02)	-0.07** (0.03)	-0.03 (0.03)	0.97
Bond to biological mother			-0.00 (0.05)	-0.05 (0.05)	-0.03 (0.05)	0.97
Biological mother smokes			0.17 (0.11)	0.17 (0.11)	0.08 (0.11)	1.09
Interview date, wave 4				0.0007 (0.0006)	0.0004 (0.0006)	1.00
Gender (female = 1)				0.34*** (0.09)	0.49*** (0.11)	1.63***
Hispanic				-0.11 (0.17)	-0.13 (0.16)	0.87
African American				0.23+ (0.13)	-0.01 (0.14)	0.99
Asian American				-0.44 (0.36)	-0.34 (0.37)	0.71
Other				0.45 (0.24)	0.30 (0.25)	1.35
Age				0.07 (0.11)	0.07 (0.11)	1.07
Lived in single-parent family, wave 1				0.16 (0.12)	0.13 (0.12)	1.14
Parent received welfare, wave 1				0.02 (0.15)	-0.06 (0.15)	0.94
Personal income, wave 3				-0.05** (0.02)	-0.05** (0.02)	0.95**
Number of residential moves 1995 to 2001-2002				0.03 (0.02)	0.03 (0.02)	1.03

*(continued)*



**Table 4.** (continued)

	1	2	3	4	5	6 (Odds Ratio)
<b>Young adult life circumstances</b>						
Bachelor's degree, wave 4					-0.75*** (0.15)	0.47***
Ever married, wave 4					-0.26*** (0.12)	0.77*
Ever arrested, wave 4					0.32** (0.12)	1.38**
Number of children, wave 4					0.26*** (0.04)	1.29***
Ever fired or laid off, before wave 4					0.12*** (0.04)	1.13***
Constant	-2.28*** (0.05)	-2.52*** (0.06)	-1.57*** (0.31)	-14.67 (10.65)	-9.69 (10.58)	
Adjusted Wald statistic	38.41***	55.66***	17.91***	13.90***	20.90***	

Source: Add Health, 1994/1995–2007/2008.

Note: N = 9,401 Coefficient (b)/ Standard Error (sb).

+p < 0.1; \*p < .05; \*\*p < .01; \*\*\*p < .001 (two-tailed tests)

**Figure 3.** Odds Ratios and Adjusted Odds Ratios from Multivariate Survey Adjusted Logistic Regression Analyses



Source: Add Health, 1994/1995–2007/2008.

The results of the models shown across the columns in table 5 indicate consistently that experiencing paternal imprisonment between waves 3 and 4 increase the odds of economic insecurity from waves 3 to 4. In column 1, having a father incarcerated between waves 3 and 4 increases the odds of experiencing economic insecurity by 2.17 ( $p < 0.01$ ). The measure of paternal imprisonment used is a lifetime mea-

sure (ever imprisoned) that respondents reported at waves 3 and 4. However, respondents who indicated that their father was imprisoned at wave 3 but not at wave 4 may have wrongly reported this, introducing measurement error. Accordingly, in model 1 we set the cases where this happened to missing.

Also in model 1, differences in residential parenthood that involve having an additional

**Table 5.** Survey-Adjusted Fixed-Effects Regressions (Two-Period Case) of Differences in Any Economic Insecurity on Changes in Paternal Imprisonment and Time-Varying Young Adult Life Circumstances Between Waves 3 and 4

	1	2	3	4	5	6	7	8
	Coefficient (b)/ Standard Error (sb)	Odds Ratio	Coefficient (b)/ Standard Error (sb)	Odds Ratio	Coefficient (b)/ Standard Error (sb)	Odds Ratio	Coefficient (b)/ Standard Error (sb)	Odds Ratio
Differences in paternal imprisonment	0.77** (0.27)	2.17**	0.80*** (0.23)	2.22***	0.79*** (0.23)	2.21***		
Differences in paternal imprisonment <sup>a</sup>							0.59*** (0.17)	1.81***
Differences in bachelor's degree	-0.96*** (0.17)	0.38***	-0.98*** (0.16)	0.37***	-0.96*** (0.16)	0.38***		
Differences in bachelor's degree <sup>a</sup>							-0.88*** (0.16)	0.42***
Differences in having been married	-0.01 (0.15)	0.99	-0.02 (0.14)	0.98	-0.02 (0.13)	0.98		
Differences in having been married <sup>a</sup>							-0.06 (0.14)	0.95
Differences in having been arrested	-0.01 (0.15)	0.99	0.03 (0.14)	1.03	0.03 (0.14)	1.03		
Differences in having been arrested <sup>a</sup>							0.10 (0.14)	1.10
Differences in residential parenthood	0.26* (0.14)	1.30*						
Differences in residential parenthood <sup>a</sup>			0.22* (0.12)	1.24*			0.26* (0.11)	1.30*
Differences in living alone	0.50* (0.21)	1.65*						
Differences in living alone <sup>a</sup>			0.71*** (0.15)	2.03***	0.70*** (0.15)	2.02***	0.64*** (0.15)	1.90***
Differences in residential parenthood <sup>b</sup>					0.12* (0.06)	1.13*		
Constant	-0.25** (0.09)		0.77** (0.07)		0.75*** (0.07)		-0.27** (0.09)	
Adjusted Wald statistic	7.99***		11.43***		11.10***		9.65***	
N <sup>c</sup>	1,821		2,023		2,023		2,141	

Source: Add Health, 1994/1995–2007/2008.

<sup>a</sup>Alternative measure used, see Appendix. <sup>b</sup>Alternative measure used, see Appendix. <sup>c</sup>Sample sizes are restricted in fixed-effects logistic regression models, with cases excluded if they had the same value on the outcome variable at both time points, indicating no change in status (Allison 2009, 29).

+ $p < .1$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed tests)

child in the home or living alone increase the odds of economic insecurity. The living alone variable is unfortunately somewhat ambiguous in its meaning: it included at least some cases in which respondents chose and could afford to live alone. However, even choosing to live alone is found in the research literature to carry risks, and the risk we are concerned with is not having someone else in the household to fall back on when problems emerge. We find very clear evidence of hardship outcomes associated with living alone. Leaving these out of the article would be misleading. Unfortunately, we cannot do more with this variable, as it is a household composition measure in the survey and does not permit more nuanced assessment.

In model 2 in column 3, we next use an alternative measure of living alone between waves, because this is a wave-specific rather than a lifetime indicator. The results for the effect of paternal imprisonment on increasing economic insecurity are robust to this change in the measurement of living alone. In model 3 in column 5, we additionally use an alternative measure of differences in residential parenthood involving a count score of the number of children living in the respondent's household at waves 3 and 4. We find again that those who experienced paternal imprisonment between waves, net of other time-varying covariates, experienced heightened economic insecurity.

Finally, in model 4 in column 7, we use an alternative measure of paternal imprisonment, with respondents reporting a father in prison at wave 3 but not at wave 4 kept in the analyses (coded as -1) in the difference score rather than set to missing. This final model is consistent with those that came before. That is, after testing sensitivity to the measurement of the difference scores, we obtain the same substantive result: respondents experiencing paternal imprisonment between waves encounter more economic insecurity at wave 4, net of other time-varying covariates.

Furthermore, as seen in column 7 of table 5, obtaining a bachelor's degree between waves 3 and 4 decreases the likelihood of moving into economic insecurity, while becoming a residential parent increases these odds, and a transition to living alone also increases the odds of economic insecurity. However, differ-

ences in being arrested do not have short-term effects on differences in economic insecurity. These results are consistent with prior studies in showing that college incompleteness and family status are significant sources of severe deprivation, while the results of the present analysis are unique in revealing the importance of changes in paternal imprisonment during the recent period.

#### HUMAN RIGHTS AND SEVERE DEPRIVATION IN TRANSITIONS TO ADULTHOOD

Glen Elder's (1999 [1974]) seminal life-course study of the *Children of the Great Depression* highlighted the vulnerability of children in perilous economic circumstances. We too have found that the children of the 2008 Great Recession experienced economic insecurity, but in a notably new way involving the massive and unprecedented rise in parental incarceration in the late twentieth and early twenty-first centuries. Even with a wide range of variables taken into account, the early adult children in the Add Health sample with a father or mother imprisoned were uniquely likely to experience economic insecurity, including problems of access to food. We have built in this article on recent research showing that postsecondary education has become especially important in determining economic outcomes in modern American society, and we have demonstrated that achieving higher education is similarly important in reducing the effects of parental imprisonment on the economic insecurity of children. The salient policy implication of this article may be the essential role of education in reducing the unprecedented risks and vulnerabilities imposed by mass parental incarceration in twenty-first-century American society.

President Franklin D. Roosevelt (1941) responded to the vulnerability to severe deprivation created by the Great Depression by highlighting the *right* to a "freedom from want" in his famous "Four Freedoms" speech. Social scientists today recognize the significance of "freedom from want" with concepts such as economic insecurity and severe deprivation. Desmond emphasizes in the introduction to this volume that "the severe deprivation approach engages in an empirically driven values conversation about poverty in America, one

that is transparent about the moral principles undergirding research and policy, that specifies and reimagines desirable ends, and that rigorously assesses whether we are living up to our professed values.” The rights that Roosevelt enshrined in his Four Freedoms speech embodied the value commitment to eliminating severe deprivation in this richest nation on the planet.

The tools of social science can be especially important in documenting and explaining the widespread, disproportionate, and systematic vulnerabilities to human want in contemporary society. Life-course research increasingly focuses on the cumulative nature of these vulnerabilities across the transitions and trajectories of human lives, with recent scholarship focusing on transitions from childhood through adolescence to adulthood, or what is now called early and emerging adulthood (Arnett 2000; Furstenberg, Rumbaut, and Settersten 2005, 18). The challenge is to link the imperatives of a human rights framework with scientific understandings of severe deprivation and with identification of effective mechanisms for its remediation and elimination.

The United Nations Convention on the Rights of the Child (1989) has universalized the protection of children in the language of human rights and with a focus on childhood vulnerability to various forms of want and insecurity. Interdisciplinary scholars (for example, Duncan and Brooks-Gunn 1997) have advanced children’s rights by studying how parenting and childhood experiences affect the basic needs of children protected in the UN Convention. The ways in which societal institutions such as the justice system and educational institutions respond to parents and children in meeting these challenges can facilitate turning points and trajectories of development that extend through adolescence and into adulthood.

Article 28 of the 1989 United Nations Convention on the Rights of the Child mandates the provision of educational opportunities to children. Life-course studies have proven especially important in focusing on disparities and vulnerabilities in transitions from childhood to adulthood—for example, in access to and completion of higher education. The children of incarcerated parents are in special need of

educational opportunities to reduce the heightened vulnerabilities they experience.

Duncan Gallie and Serge Paugam (2000, 370) provide a perspective that effectively summarizes the systemic exclusionary risks of the kinds of food and housing deprivations we have found among children of incarcerated mothers and fathers during the recent economic recession. They write that “social exclusion refers to a situation where people suffer from . . . cumulative disadvantages” and that “the different aspects of deprivation become mutually reinforcing over time, leading to a downward spiral in which the individual comes to have neither the economic nor the social resources needed to participate in their society.” These restricted resources among children of incarcerated parents may especially involve problems of access to, and support for sustaining, postsecondary education.

We believe it is also important to emphasize that the risks of this kind of social exclusion among the children of incarcerated parents are largely the result of deliberate policy choices enacted through determinate and mandatory minimum sentencing laws and related policies and practices such as prison without parole and “three strikes.” Kathleen Daly’s (1987a, 1987b, 1989a, 1989b) findings on the period before the passage of these laws and the adoption of these guidelines reflects the background of this consequential policy development.

Daly found that pre-guideline judges expressed concerns in interviews and at sentencing that by incarcerating “familied offenders” they would “break up families” and “punish innocent family members” (see Daly and Bordt 1995, 163). Pre-guideline research by Daly found evidence that judges more leniently sentenced women who were also mothers, and further evidence that some judges also leniently sentenced fathers who provided reliable support to mothers and children (Daly 1989a). These leniency effects based on family care responsibilities conflicted with the subsequent policies demanded by federal and state commissions for equal treatment based on conviction records and charges, regardless of parenting expectations or responsibilities (Stith and Koh 1993). These were deliberate policy choices with far-reaching consequences of the kind empha-

sized in the concept of systemic social exclusion and in the findings reported in this article.

Daly argued that “equal treatment of defendants whose responsibilities for others not only varied but differed by gender may be unjust” (see Daly and Bordt 1995, 163). She further reasoned that a source of this problem was the policy choice that made “unfamiliar” males rather than “familiar” females the standard of comparison. Daly (1995) argued instead for a reversal in this policy, maintaining that provisions allowing consideration of parenting as a factor in sentencing for both men and women could have spared many fathers as well as mothers from prison, and thus reduced rising imprisonment. However, federal and state sentencing commissions adopted guidelines that reduced judicial discretion, which had been the norm since the founding of the republic, and directed judges to punish mothers equally based on the statutory seriousness of the offense and prior convictions, while disregarding gender-linked family responsibilities.

This policy experiment had profound implications for mothers and fathers of children. It meant treating as equal accused men and women whose family-connected vulnerabilities were actually quite different. Since judges previously incarcerated many fewer women than men, the new guidelines especially increased rates of female imprisonment. Meanwhile, of course, elevated and determinate sentences more broadly increased rates of confinement, and increasing numbers of these men as well as women were parents. The number of young people whose lives as a result were disrupted by separation from their imprisoned parents grew dramatically (Patillo, Weiman, and Western 2004).

Social exclusion is the result of a mixture of private- and public-sector sources of deprivation. An important body of research has focused on the combined roles of family socioeconomic status and welfare provisions in determining educational attainment and economic deprivation and security. Beckett and Western’s (2001) finding that by 1995 the relationship between welfare support and penal punitiveness had turned strongly negative in the United States

suggests that criminal sentencing policy is an important factor for consideration in studies of severe deprivation. American life-course research increasingly informs us that social inequality and exclusion is the result of interactions across human lives between private- and public-sector institutional arrangements and individual biographies (O’Rand 1996a, 1996b) and family backgrounds (Warren, Sheridan, and Hauser 2002, 433). There may be no more consequential shift over the last half-century in public-sector treatment of already disadvantaged Americans than the exclusionary use of incarceration.

## APPENDIX

### Young Adult Income Insecurity

#### *Economic insecurity at wave 4*<sup>†</sup>

*In the past twelve months, was there a time when (you/your household) . . .*

- (1) . . . (were/was) without phone service because you didn’t have enough money?
- (2) . . . didn’t pay the full amount of the rent or mortgage because you didn’t have enough money?
- (3) . . . didn’t pay the full amount of a gas, electricity, or oil bill because you didn’t have enough money?
- (4) . . . had the service turned off by the gas or electric company, or the oil company wouldn’t deliver, because payments were not made?
- (5) . . . worried whether food would run out before you would get money to buy more?

Alpha = 0.75

#### *Economic insecurity at wave 4*

*In the past twelve months, was there a time when (you/your household) . . .*

- (1) . . . (were/was) without phone service because you didn’t have enough money?
- (2) . . . didn’t pay the full amount of the rent or mortgage because you didn’t have enough money?
- (3) . . . didn’t pay the full amount of a gas, electricity, or oil bill because you didn’t have enough money?

<sup>†</sup> See table 1 notes.

- (4) . . . had the service turned off by the gas or electric company, or the oil company wouldn't deliver, because payments were not made?

Alpha = 0.72

#### *Economic insecurity at wave 3*

*In the past twelve months, was there a time when (you were/your household was) . . .*

- (1) . . . without telephone service for any reason?  
 (2) . . . didn't pay the full amount of the rent or mortgage because you didn't have enough money?  
 (3) . . . didn't pay the full amount of a gas, electricity, or oil bill because you didn't have enough money?  
 (4) . . . had the service turned off by the gas or electric company, or the oil company wouldn't deliver, because payments were not made?

Alpha = 0.64

#### *Any economic insecurity at wave 4<sup>a</sup>*

We used a five-item measure dichotomized to indicate any economic insecurity at wave 4.

#### *Any economic insecurity at wave 4*

We used a four-item measure dichotomized to indicate any economic insecurity at wave 4.

#### *Any economic insecurity at wave 3*

We used a four-item measure dichotomized to indicate any economic insecurity at wave 4.

#### *Food insecurity at wave 4*

*In the past twelve months, was there a time when (you were/your household was) worried whether food would run out before you would get money to buy more?*

#### **Parental Imprisonment**

##### *Paternal imprisonment at wave 4*

*(Has/did) your biological father ever (spent/spend) time in jail or prison? 1 = yes, 0 = no.*

##### *Paternal imprisonment at wave 3*

*Has your biological father ever served time in jail or prison? 1 = yes, 0 = no.*

##### *Maternal imprisonment at wave 4*

*(Has/did) your biological mother ever (spent/spend) time in jail or prison? 1 = yes, 0 = no.*

#### **Young Adult Sociodemographics**

*Hispanic, African American, white (reference), Asian American, and other*

We used adolescent self-reported racial and ethnic identification data at wave 1 to construct the race-ethnicity dummy variables. Incidences of Hispanic status were used to first categorize respondents, followed by other group designations. The reference group in the analyses was the white non-Hispanic group.

##### *Gender*

1 = female, 0 = male.

##### *Age at wave 4*

We calculated age at wave 4 using birth date and interview date.

##### *Parent welfare receipt at wave 1*

A parent was asked at wave 1: *Are you receiving public assistance, such as welfare? 1 = yes, 0 = no.*

##### *Lived in single-parent family at wave 1*

We used the measure created by Kathleen Mullan Harris (1999) to operationalize family status using adolescent household roster information to index living in a single-parent household compared to all other family types.

##### *Interview date at wave 4 (number of days since January 1, 1960)*

The interview date at wave 4 ranged between 2007 and 2009. We conducted the interviews primarily over the twelve months of 2008, completing 1.23 percent of the interviews in 2007 and 99.15 percent of them before 2009.

##### *Log personal income at wave 3*

Personal income responses were combined from two questions.

Including all the income sources you reported above, what was your total personal income before taxes in 2000–2001? Please include all of the income sources you identified in the previous question. \$0–509,909.

Those who responded that they did not know were asked: *What is your best guess of*

*your total personal income before taxes?* Categories were: (1) less than \$10,000, (2), \$10,000 to \$14,999, (3) \$15,000 to \$19,999 (4) \$20,000 to \$29,999, (5) \$30,000 to \$39,999, (6) \$40,000 to \$49,999, (7) \$50,000 to \$74,999, (8) \$75,000 or more.

“Don’t know” responses to the first question were set to the midpoint of the selected income category.

#### *Number of moves 1995 to 2001–2002*

*Since the beginning of June 1995, at how many (other) addresses have you lived?* Answers ranged from zero to ten other addresses lived at during this period. If respondents indicated that they had always lived at their current address or had moved there before 1995, they were set to 0 on this measure.

#### **Young Adult Life Circumstances**

##### *College degree, wave 4*

*What is the highest level of education that you have achieved to date?* (1) eighth grade or less; (2) some high school; (3) high school graduate; (4) some vocational/technical training (after high school); (5) completed vocational/technical training (after high school); (6) some college; (7) completed college (bachelor’s degree); (8) some graduate school; (9) completed a master’s degree; (10) some graduate training beyond a master’s degree; (11) completed a doctoral degree; (12) some postbaccalaureate professional education (for example, law school, medical school, nursing school); (13) completed postbaccalaureate professional education (for example, law school, medical school, nursing school). 1 = completed college (bachelor’s degree or higher), 0 = else.

##### *Bachelor degree, wave 3*

*What degrees or diplomas have you received? Indicate all that apply.* Bachelor’s degree—a BA, AB, or BS. 1 = received a degree, 0 = else.

##### *Ever fired or laid off, wave 4 (2001)*

*Thinking back over the period from 2001 to [the previous year], how many times have you been fired, let go, or laid off from a job?* Answers ranged from zero to fifty.

##### *Ever married, wave 4*

*How many persons have you ever married? Be sure to include your current spouse if you are married now.* 1 = any person married, 0 = else.

##### *Ever married, wave 3*

*How many times have you been married?* 1 = any marriage, 0 = else.

##### *Ever arrested, wave 4*

We used combined responses from three questions for this preconstructed variable: (1) *Have you ever been arrested?* 1 = yes, 0 = else; (2) a preconstructed indicator of whether the interview was conducted in prison; 1 = yes, 0 = else; and (3) *How many times have you been arrested?* 1 = one or more, 0 = else.

##### *Ever arrested, wave 3*

*Have you ever been arrested or taken into custody by the police?* 1 = yes, 0 = no.

##### *Number of children, wave 4*

We used a number-of-children indicator based on the number of children reported as still living (*How many of these children are still living?*). This composite variable also used information from (1) *Thinking about all the relationships and sexual encounters you have ever had, (how many times have you ever been pregnant/how many times have you ever made a partner pregnant)? Include all pregnancies, whether they resulted in a baby born alive, stillbirth, abortion, miscarriage, or ectopic or tubal pregnancy,* and (2) *How many live births resulted from (this pregnancy/these pregnancies)?*

##### *Resident parenthood, wave 3*

Using information from the household roster on nineteen relationships, we coded instances of living with a son or daughter as 1 and other relationships as 0. A count of sons and daughters across these relationships indicated respondent resident parenthood. This measure was then dichotomized to indicate any resident parenthood.

##### *Resident parenthood, wave 4*

Using information from the household roster on sixteen relationships, we coded instances of living with a son or daughter as 1 and other relationships as 0. A count of sons and daugh-

ters across these relationships indicated respondent resident parenthood. This measure was then dichotomized to indicate any resident parenthood.

#### *Living alone, wave 3*

Do you live (here/there) alone or with others? 1 = alone, 0 = else.

#### *Living alone, wave 4*

Do you live alone or with others? 1 = alone, 0 = else.

### **Differences in Life Circumstances**

#### *Differences in paternal imprisonment*

*Paternal imprisonment at wave 4 minus paternal imprisonment at wave 3:* We coded responses 1 where the respondent did not report their father being imprisoned at wave 3 but did report their father being incarcerated at wave 4. 0 = respondent indicated that their father was not incarcerated at wave 3 or 4.

#### *Differences in paternal imprisonment<sup>a</sup>*

*Paternal imprisonment at wave 4 minus paternal imprisonment at wave 3:* We coded responses 1 where respondent did not report their father being imprisoned at wave 3 but did report their father being incarcerated at wave 4. 0 = respondent indicated that their father was not incarcerated at wave 3 or 4; -1 = respondent indicated that their father was incarcerated at wave 3 but not at wave 4.

#### *Differences in bachelor's degree*

*Bachelor's degree at wave 4 minus bachelor's degree at wave 3:* 1 = respondent reported having a bachelor's degree at wave 4 but not at wave 3; 0 = respondent did not report having a bachelor's degree at wave 3 or 4.

#### *Differences in having been married*

*Respondent married at wave 4 minus respondent married at wave 3:* 1 = respondent was married at wave 4; 0 = respondent was not married at wave 3 or 4.

#### *Differences in having been arrested*

*Ever arrested at wave 4 minus ever arrested at wave 3:* 1 = respondent was arrested at wave 4; 0 = respondent was not arrested at wave 3 or 4.

#### *Differences in living alone*

*Living alone at wave 4 minus living alone at wave 3:* 1 = respondent was living alone at wave 4; 0 = respondent was not living alone at wave 3 or 4.

#### *Differences in living alone<sup>a</sup>*

*Living alone at wave 4 minus living alone at wave 3:* 1 = respondent was living alone at wave 4; 0 = respondent was not living alone at wave 3 or 4; -1 = respondent was living alone at wave 4 but not living alone at wave 3.

#### *Differences in resident parenthood*

*Resident parenthood at wave 4 minus resident parenthood at wave 3:* 1 = respondent was a resident parent at wave 4; 0 = respondent was not a resident parent at wave 3 or 4.

#### *Differences in resident parenthood<sup>a</sup>*

*Resident parenthood at wave 4 minus resident parenthood at wave 3:* 1 = respondent was a resident parent at wave 4; 0 = respondent was not a resident parent at wave 3 or 4; -1 = respondent was not a resident parent at wave 4 but was at wave 3.

#### *Differences in resident parenthood<sup>b</sup>*

Differences in the count score of the number of resident children between waves 3 and 4.

### **Controls**

#### *Biological father's alcoholism, wave 1*

We created a dummy variable where a positive response indicated that the child's biological father was alcoholic, as indicated in a question posed in the parent questionnaire at wave 1.

#### *Biological father's education*

This variable combined information from adolescent reports at wave 1 on biological fathers from the nonresident biological father section of the questionnaire and the resident father section. It used responses to the question that reported the father's level of education: *How far in school did your biological father go?* The same response scale was used for a question on the education level of the resident father that was used if the person filling out the parent questionnaire was the child's biological father or if it was indicated



that the biological father lived in the household.

#### *Bond to biological father*

This variable combined information from adolescent reports on biological fathers from the nonresident biological father section of the questionnaire and the resident father section. Youth with nonresident biological fathers were asked: *How close do you feel to your biological father?* 1 = not close at all, 2 = not very close, 3 = somewhat close, 4 = quite close, and 5 = extremely close. Information was also used on relations with the father figure if the parent interview indicated that the person filling out the parent questionnaire was the child's biological father or that the biological father lived in the household, using the item: *How close do you feel to your (father figure)?* 1 = not at all, 2 = very little, 3 = somewhat, 4 = quite a bit, and 5 = very much. The two questions were combined to take a nonmissing response as the indicator of the respondent's closeness to the biological father.

#### **Other Parental Characteristics**

##### *Biological father smokes*

This variable combined information from adolescent reports on biological fathers from the nonresident biological father section of the questionnaire and the resident father section. Adolescents responded to the question on nonresident fathers: *Has your biological father ever smoked cigarettes?* 1 = yes. If the parent interview indicated that the person filling out the parent questionnaire was the child's biological father or that the biological father lived in the household, this measure also used information on the resident father from the question: *Has he ever smoked?* 1 = yes. A positive response to either of these two questions indicated that the biological father smoked.

##### *Biological mother's alcoholism, wave 1*

We created a dummy variable where a positive response indicated that the child's biological mother was alcoholic, as indicated in a question posed in the parent questionnaire at wave 1.

##### *Biological mother's education*

This variable combined information from adolescent reports at wave 1 on biological moth-

ers from the nonresident biological mother section of the questionnaire and the resident mother section. It used responses to the question that reported the mother's level of education: *How far in school did your biological mother go?* The same response scale was used for a question on the education level of the resident mother that was used if the person filling out the parent questionnaire was the child's biological mother or if it was indicated that the biological mother lived in the household.

##### *Bond to biological mother*

This variable combined information from adolescent reports on biological mothers from the nonresident biological mother section of the questionnaire and the resident mother section. Youth with nonresident biological mothers were asked: *How close do you feel to your biological mother?* 1 = not close at all, 2 = not very close, 3 = somewhat close, 4 = quite close, and 5 = extremely close. Information was also used on relations with the mother figure if the parent interview indicated that the person filling out the parent questionnaire was the child's biological mother or that the biological mother lived in the household, using the item: *How close do you feel to your (mother figure)?* 1 = not at all, 2 = very little, 3 = somewhat, 4 = quite a bit, and 5 = very much. The two questions were combined to take a nonmissing response as the indicator of the respondent's closeness to the biological mother.

##### *Biological mother smokes*

This variable combined information from adolescent reports on biological mothers from the nonresident biological mother section of the questionnaire and the resident mother section. Adolescents responded to the question on nonresident mothers: *Has your biological mother ever smoked cigarettes?* 1 = yes. If the parent interview indicated that the person filling out the parent questionnaire was the child's biological mother or that the biological mother lived in the household, this measure also used information on the resident mother from the question: *Has she ever smoked?* 1 = yes. A positive response to either of these two questions indicated that the biological mother smoked.

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