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EXECUTIVE SUMMARY

**Final Report: "Labor Force Participation, Labor Markets, and Crime"[1]
Grant number 2000-IJ-CX-0026**

May 12, 2006
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Introduction:

The intent of this project was to exam the relationship between labor market experience and crime. In particular it is a study how individuals' employment and educational circumstance affects the likelihood of engaging in acts of common crime. We also study how the characteristics of residential neighborhoods interact with individual characteristics to affect criminal involvement.

This research is based on the labor stratification and crime thesis that argues that it is not simply work vs. unemployment that matters in determining if crime is more likely but also the quality of jobs that are important. Central to this thesis is the idea that those without work or with intermittent employment, low income, and little chance for improving their lot will have diminished "stakes in conformity." Without stakes in conformity that actively discourage deviant behavior, individuals are more likely to engage in criminal or socially unacceptable behavior. This approach does not portray involvement in crime as necessarily utilitarian; we suspect that, for many people, the route to crime is not very calculated. While financial struggles associated with unemployment may in some cases encourage a person to engage in profit oriented crime, it is also possible that the lack of structured activity and personal investment associated with good employment may create a situation lacking the necessary informal deterrents to deviant or criminal behavior.

This thesis also argues that when parents or adults in a community are out of work or marginally employed that children will not be as likely to invest in or do well in school; consequently they are more likely to become delinquent. That is, children invest less in education when the evidence in front of them, the work experience of parents and

other adults, suggests that "playing by the rules" offers little hope for advancement or material wealth. When adults struggle in the labor market, children are not likely to have much faith in the power of education in their lives. Conversely children whose parents' and neighbors' whose investment in education has obviously paid off have more affirming examples before them.

Finally, the labor market stratification thesis suggests that crime and delinquency preventing bonding processes do not work in isolation. While no job or a bad job may be criminogenic for some individuals, there is no clear evidence that this is the case for most. We hypothesize that a social process entailing others who face the same kind of intermittent employment in "bad jobs" encourages the conditions that may transform individual potential into actual criminal involvement.

The Study:

The goal of this project is to answer the following questions about the relationship between employment, crime and delinquency:

1. How do employment and job qualities effect individual young adults' involvement in crime?

2. How do neighborhood characteristics effect young adults' involvement in criminal behavior and how is the relationship between individuals' employment and criminal involvement conditioned by neighborhood characteristics?

3. How are juvenile employment and education related to delinquency?

4. How do parents' labor market and education experiences affect juvenile delinquency?

5. Which, if any, neighborhood characteristics are associated with juveniles'

involvement in crime? And, how are the relationships between juveniles'

employment and educational experiences conditioned by characteristics of the

neighborhoods that they live in?

   The data used in this project are the "Children and of the NLSY" and the "NLSY97"

data sets that are collected and housed at the Center For Human Resources Research at

The Ohio State University. The data collection and maintenance is funded by the Bureau

of Labor Statistics in the U.S Department of Labor.

   To summarize the findings of the project we refer back to the five general

research questions. Regarding question one; there is a modest relationship between

employment and criminal involvement for young adults. Those who were working were

less likely to have reported that they had engaged in criminal behavior in the year prior to

their interview. Also, young adults who are employed in secondary sector jobs, those

positions that are more marginal to the labor market, are more likely to have committed

criminal violations. We found these effects in urban areas but not among the rural sub-

samples. There employment appears to be unrelated to young adult criminality.

   Regarding question two we found that neighborhood characteristics had little

consequential direct influence on the criminality of young adults living within a census

tract. And, that contrary to our hypothesis, the influence of employment (again if the

respondent is employed and whether the job is a secondary sector occupation) is not

conditioned by the level of disadvantage of the neighborhood in which respondents live.

This non-finding appears to be counter to early research (Crutchfield and Pitchford,

1997) that reported that the unemployment rate of counties conditioned the effects of

individuals' employment on criminality. We believe that these findings are not contrary,

but rather that neighborhoods are far less important for young adults than local labor markets in influencing their economic and criminal lives.

The analyses for question three found that when other factors are taken into account, the employment of juveniles has no measurable effect on delinquency. By contrast, the educational experience, most notably attachment to school, and to lesser extent respondents' grades, does modestly predict who engages in illegal activity. Adolescents who report being more attached to school report less delinquency and those who do not do as well in school are more likely to have been law violators. Also, family poverty is positively related to delinquency.

Question four focuses on the influence of adult employment on juvenile delinquency. Parental work status does not appear to have a direct influence on delinquency, but it influences it indirectly through youth school experience. Also, parental involvement in their child's school, which is incidentally positively related to maternal education, indirectly affects delinquency through educational attachment and grades.

Question five is about the influence on juveniles of living where adult marginal labor market participation is higher. Neighborhood disadvantage negatively influences mothers' employment. But the other neighborhood variables have no measurable effects on delinquency.

Our analyses did find several notable conditional effects. The influence of grades on delinquency is conditioned by neighborhood disadvantage, the proportion of residents who are marginal to the labor market, and the proportion of adults who hold high school diplomas. Children who get better grades experience less insulation from delinquency

when they live in difficult neighborhoods as measured by these variables. Parental involvement is also conditioned by the educational achievement of neighbors. Where fewer finished high school, parental involvement in their children's school is less of a protective factor against delinquency than in more educated communities. Finally, mothers' employment, a significant influence on respondents' school experience, is conditional on neighborhood disadvantage. Her employment has greater value on delinquency prevention in distressed residential areas.

Conclusions:

We offer the following suggestions for research and public policy. Regarding research, the current quest by a number of researchers to find, identify, and understand the effects of social context on criminality should be encouraged. This search is going on, but these effects when they are found have been modest and frequently researchers have found no effect. We should not prematurely abandon the search, nor should we conclude that the lack of direct effects means that context does not help to explain crime, or is of little importance. To the contrary, our finding modest contextual effects using the NLSY, which is notorious for yielding small effects in studies of crime, should be seen as affirmation that context matters and should continue to be a focus of study.

This research was not designed to primarily study public policy, but the implications of our results for public policy are worth considering. First, some have posited that the way to combat juvenile delinquency is to make sure that jobs for young people are available. We are not prepared to say that this is not true to some extent; rather we want to emphasize the primacy of school and educational experience as delinquency prevention. If youth employment programs are used perhaps they should be

designed so that they encourage school performance rather than serve as a competitor with schools for a young person's energies and focus.

This research also suggests that working against forces that are now reducing the number of "family wage jobs" is potentially an important way to reduce crime. Employing mothers and fathers in good jobs has a positive effect on their children and on their communities. It is easier to suggest this policy than to deliver on it. But our work may serve as a warning that to continue on the path toward the reduction of manufacturing jobs, with their primary sector character, and the shift towards service sector jobs, with their secondary sector characteristics, may well work against maintaining the relatively low levels of crime and delinquency that the US has experienced in recent decades.

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INTRODUCTION

The intent of this project was to exam the relationship between labor market experience and crime. In particular it is a study of how individuals' employment and educational circumstance affects the likelihood of engaging in acts of common crime. We also study how the characteristics of the local labor market interact with individual characteristics to affect criminal involvement.

This is an old criminological topic but this research studies work and crime in several ways that have only begun to be examined in the current research literature. Key differences between this project and "traditional" studies of work and crime are: (1) this study goes beyond simply considering the relationship between unemployment and crime. (2) This research examines how the characteristics of some types of jobs are related to heightened levels of criminal involvement. (3) This study examines both micro and macro factors effecting criminality. The project builds on recent research, which suggests that employment, and labor market experience may be critical lynchpins that will help us to understand the seemingly elusive relationship between economic circumstance and crime.

GOALS AND OBJECTIVES

The goal of this project is to answer a set of questions about the relationship between work and crime. Because one of our major concerns is how economics and labor market variation affect juvenile delinquency, we also focus on educational experience. The logic of including education in this study will be described in detail below. The questions, which are listed below, are framed by the "labor stratification and crime" thesis (Crutchfield, 1989; 1995; Crutchfield and Pitchford, 1997; Crutchfield,

Glusker and Bridges, 1999).

Research questions:

1. How do employment and job qualities effect individual (both adult and juvenile) involvement in crime?

2. How do neighborhood characteristics effect young adults' involvement in criminal behavior and how is the relationship between individuals' employment and criminal involvement conditioned by neighborhood characteristics?

3. How are juvenile employment and education related to delinquency?

4. How do parents' labor market and education experiences affect juvenile delinquency?

5. Which, if any, neighborhood characteristics are associated with juveniles' involvement in crime? And, how are the relationships between juveniles' employment and educational experiences conditioned by characteristics of the neighborhoods that they live in?

We will elaborate the logic of these questions and the theoretical basis for our predictions below.

There are two objectives for this project. The first is to test the "labor stratification and crime" thesis. The second is more important. We believe that public policy has not been sufficiently informed by knowledge about how the economy affects crime. This is so because we have had a very incomplete understanding of this relationship. We will not dare to suggest that this project will yield a complete understanding, but we believe that a more developed elaboration of this relationship may improve on the "everybody knows that…" (they steal because they're hungry, they're violent because they're drug dealers, etc.) perspectives that have dominated public

discussion. So, our second objective is to provide an analytically rigorous assessment of means by which the economy, in the form of jobs, affects individuals' criminality, and how the neighborhood, and local labor markets interact with individuals' experience to effect crime.

THE RESEARCH LITERATURE

In recent years there has been much public and academic discussion about how changes in the American labor market, most notably the decline in low skilled blue collar jobs, has led to a host of urban problems, including crime (Wilson, 1987; 1997). What has not been as clear is exactly how this change or how other factors related to work affects crime. Nevertheless, there persists a belief that the economy, economic position, and in particular employment, affects crime

Economics and Crime

Economic factors have long been a major focus in attempts to explain crime and delinquency. From the empirical work of Guerry and Quetelet in nineteenth century France (Vold et al., 1998) to the social disorganization theory of the Chicago School (Shaw and McKay 1942) to the more recent adaptations of control theory (Hagan, Gillis and Simpson, 1985) economic stratification has played a pivotal role in criminological theory. Shaw and McKay's (1942) social disorganization theory looks to the weakness of institutions of social control in poor urban areas caused by a lack of resources and constant mobility. Sutherland's (1947) differential association theory claimed that poor youths would have a higher frequency of association with definitions favorable to law violation because they are more likely to be living in disorganized areas, or areas with illegitimate opportunity structures. Merton's strain theory (1938) assumed that frustration among lower class youth as a result of blocked opportunities to culturally

defined goals would be the catalyst for delinquent behavior. Hirschi's (1969) social control theory claimed that lower class youth would have weaker bonds to family, school and conforming activities that would act to inhibit deviant behavior. A variety of the more contemporary theories tend to be outgrowths of the earlier perspectives just mentioned.

Despite a vast body of research in all of these theories, the evidence for a direct relationship between socioeconomic status and crime and delinquency has been inconsistent, and therefore inconclusive (Tittle and Meier, 1990). While we have support for this relationship at the aggregate level (Blau and Blau, 1982; Messner and Golden, 1992) we do not see consistent results in studies focusing on individual behavior (Tittle et al., 1978). While some have suggested that this disparity in results from individual level research is caused by the difference between using official records and self-report data (Kleck, 1982; Nettler, 1978), Hindelang et al. (1979) have made a strong argument against this suggestion. Looking beyond measurement issues to theoretical conceptualization, this lack of consistent empirical support may be related to difficulties in conceptualizing the independent variable in a manner that captures the causal element (i.e. the mediating process) connecting the exogenous variables with crime rates or individual involvement in law-violating behavior.

Three trends have dominated much of the sociological research on economics and crime. The first perspective stems from the work of Durkheim (1950) followed by Merton (1938) and looks at aggregate level data in examining the relationship between socioeconomic factors such as poverty, employment opportunities or economic inequality and criminal behavior (Blau and Blau, 1982). This research, which are drawn from the ideas of strain and relative deprivation theories, has discovered relationships at the macro

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level that have been useful in the development of criminological theory, and in suggesting directions for further research. However, due to its level of measurement and the difficulty in the operationalization of the mediating processes (feelings of frustration and relative deprivation), this area of research cannot empirically tell us much about motivation and proximate causes of crime and delinquency at the individual level.

The second line of work focuses on the process through which socioeconomic factors, such as joblessness, quality of employment, and social and industrial composition encourage higher crime rates and individual criminal behavior (Crutchfield, 1989; Crutchfield and Pitchford, 1997; Larzelere and Patterson, 1990; Sampson and Laub, 1993; Wadsworth, 1997; Bellair, Roscigno, and McNulty, 2003). While researchers taking this approach have conceptualized the importance of work in a number of different ways (bonds to conformity, economic opportunity, routine activities) emphasis on employment, and how it affects lifestyles, has been a common denominator among them. This theoretical and empirical focus, and the labor stratification and crime perspective that has emerged from it, will be discussed more thoroughly below.

The third line of work, proposed by Banfield (1968) and Murray (1984), also focuses on employment, or lack thereof, but views this phenomenon as the result of cultural factors that also influence criminal behavior. This perspective suggests that many of the inhabitants of poor urban communities (and hence persons with intermittent and/or low paid employment) are the carriers of a set of norms and values that discourage legal employment and encourage involvement in deviant behavior. Once developed, these norms and attitudes give rise to a subculture of poverty that will regenerate attitudes and norms conducive to crime and deviance independent of structural forces. While this perspective enjoyed a renewed popularity among politicians and a variety of social

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scientists in the 1980's, we believe that it is not without serious shortcomings. The processes by which these particular norms and values were initially established in poor urban communities remain obscure, and the means by which the vast majority of law abiding residents of these communities escape the influence of this culture remain unspecified. Further, the critical variables for this perspective, such as pro-violence norms and values, are notoriously difficult to measure. Hence, this form of these kinds of explanations seems to provide limited insight into the link between work, or social class, and criminality.

A variant on cultural explanations though emphasize how oppositional or subcultural values emerge from structured inequality and marginalization. These perspectives have been supported by good ethnographic work that clearly links criminal behavior, and values and belief systems conducive to criminal involvement, to segments of communities where residents are subject to chronic employment problems and the resultant poverty (Anderson, 1999, Bourgois, 1995; Pattillo-McCoy, 1999; Sullivan, 1989; Venkatesh, 2000).

<u>Work and Crime</u>

Most sociological discussions of work, from all three of the trends discussed above, have focused on the relationship between unemployment and crime. In looking at aggregate level data, we can conclude that there is not a consistent relationship between the unemployment rate and crime rates (Freeman, 1983, Cantor and Land, 1985; Parker and Horwitz, 1986; Box, 1987; Chiricos, 1987). Gillespie (1975) reports that before 1975 there was no significant relationship between unemployment and crime, while in a later review Box (1987) concludes that while the evidence is mixed, the weight of the evidence suggests a modest positive association between unemployment and crime.

Chiricos's meta-analysis (1987) suggests a positive and frequently significant relationship between unemployment and crime, especially property crime, and that this effect was stronger after 1970. He also suggests that that the positive relationship between unemployment and crime is likely to be stronger when the geographic units of analysis are smaller and more homogenous. In more diverse or stratified locations, particular areas within the larger unit of analysis may not be affected by general economic conditions. While also using aggregate level data, but employing a more encompassing routine activities perspective, Cantor and Land (1985) uncovered further complexity in the relationship between unemployment and crime. They found that the relationship is strongest for property crime, and argue that unemployment increases the demand for crime (motivated actors); at the same time, however, it reduces the supply of available victims (target households are more likely to have someone who can serve as a guardian at home when a resident is unemployed). Hale and Sabbagh (1991) take issue with Cantor and Land's model specification, but they do not disagree that the unemployment and crime relationship is complex and in some instances significant. A decade ago Britt (1994) reported that youth crime is positively related to unemployment, but that this relationship is affected by changes in annual levels of youth unemployment. Allan and Steffensmeier's research (1989) suggests that youth crime may have an inverse relationship with the availability of low skilled, low wage jobs while adult crime may be unrelated to the availability of such jobs while being inversely related to the availability of higher quality jobs that pay better and require more skill.

Thornberry and Christenson's (1984) and Hagan's (1993) findings would suggest that a problem with much of the literature in this area is that it assumes that unemployment causes crime. Both of these papers show that we need to consider the

reciprocal effects of criminal behavior on employment as well. Staley, (1992) in his book on drug policy and U.S. cities, argues that the illegal drug trade, and the criminality it engenders, has created an environment inhospitable to the growth of legitimate business endeavors which depend on rule adherence, long term planning, the power of law, and reciprocal agreements. By fostering an environment in which economic endeavors are less likely to succeed, legitimate economic opportunity is further diminished through loss of potential jobs and community investment. Sullivan's (1989) study of the adaptation of young men to marginal communities suggests similar patterns. How these young men adapted was predicated on real and perceived economic opportunities in their environment. At a minimum, we should be aware that simplistic notions about the relationship between unemployment and crime have limited utility, but that the connection between work and crime is of substantial criminological importance.

When our consideration is broadened to examine not simply unemployment rates but also patterns of employment, as well as the quality of jobs that individuals hold, as evidenced in Allan and Steffensmeier's work (1989), the picture becomes even more complex. A number of researchers have argued that the quality of work can affect propensity toward crime through attachments to legitimate work and "stakes in conformity" (Votey and Phillips, 1974; Cook, 1975; Jeffery, 1977; Orsagh and Witte, 1981; Crutchfield, 1989). Duster (1987) and Auletta (1983) have both argued that employment discrimination reduces attachment to the labor market, which theoretically can lead to higher crime rates. There are consequences for communities, also, when people have low quality and unstable employment. McGahey (1986) reports that persistent unemployment among adults weakens informal social controls in neighborhoods, which in turn leads to increased delinquency among the young. Wilson,

(1987, 1997) argues that the stability and routinization[2] that accompany regular work are very positive forces at both the individual and family level. These forces, he contends, discourage deviance among parents while increasing the likelihood of supervision and pro-social child development. Wadsworth (2000) found support for this claim in his research focusing on the influence of parental job characteristics on levels of parental supervision and children's attitudes. It is important to note, however, that unemployment and secondary sector employment should not be seen as variables that are necessarily directly criminogenic; they, along with other employment characteristics, should be viewed as important determinants of the context in which the effects of other social forces will be played out (see also Kohfeld and Sprague, 1988).

Labor Market Stratification and Crime

Our perspective on the link between work and crime is that those with intermittent employment, low income, and little chance for improving their lot will have diminished "stakes in conformity" (Toby, 1957; Hirschi, 1969; Crutchfield, 1989; Sampson and Laub, 1990). Without these forces actively discouraging deviant behavior, individuals are more likely to engage in criminal or socially unacceptable behavior. This approach does not portray involvement in crime as necessarily utilitarian; we suspect that, for many people, the route to crime is not very calculated. While financial struggles associated with unemployment may in some cases encourage a person to engage in profit oriented crime, it is also possible that the lack of structured activity and personal investment associated with employment may create a situation lacking the necessary informal deterrents to deviant or criminal behavior.

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[2] Wilson (1987, 1995) uses "routinization" to discuss the importance of regular and stable work that provides a structure which is beneficial to the organization of family functions such as child care, supervision and family activities. His conception of routinzation should not be confused with that Of Kohn (1986) who uses the term to describe the mundane and repetitive nature of certain types of labor.

The labor stratification and crime perspective, which is based upon labor market segmentation arguments, suggests that while it is unlikely that unemployment has a direct causal relationship with crime, both unemployment and poor quality employment (jobs in the secondary sector of the economy), can *indirectly* affect crime rates, because of their destabilizing effects on communities (Auletta, 1983; Duster, 1987; Crutchfield, 1989). It is our argument that marginal and unstable employment exposes people to, and gives them little incentive to avoid, circumstances that are likely to lead to crime. At the individual level this increases the likelihood of participation in criminal behavior, and at the aggregate level it suggests a positive relationship between unemployment and/or low quality employment and crime rates.

Secondary sector jobs are unstable and poorly paid (Gordon, 1971; Andrisani, 1973; Bosanquet and Doeringer, 1973; Rosenberg 1975). In contrast, primary sector jobs— including the good blue collar jobs associated with manufacturing, tend to be more stable, pay better, and include substantial benefits. Workers in secondary sector jobs experience frequent turnover (Rosenberg 1975), and those employed in these types of jobs are less likely to have strong ties to coworkers or place of employment (Piore, 1975; Kalleberg, 1977).[3] These characteristics of secondary sector jobs are not the traits that bind an individual, provide stakes in conformity, or cause him to view going to work the next morning as important in the face of attractive offers to socialize with similarly employed or unemployed friends. So, the first part of the mechanism linking work to crime is the stake in conformity that comes from having a good job.

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[3] Crutchfield (1989) presents a brief bivariate analysis of General Social Survey (GSS) data that indicates that those in secondary sector occupations are more likely to be unemployed, to expect to lose their jobs, were less satisfied with their job than primary sector workers, and defined their jobs as less important to them than did primary sector workers. Secondary sector workers interviewed for the GSS were more likely to spend social evenings with neighborhood friends and young males in this group were more likely than their contemporaries to go to bars and taverns.

The second, more macro, aspect of the labor market stratification and crime perspective suggests that this bonding process does not work in isolation. While no job or a bad job may be criminogenic for some individuals, there is no clear evidence that this is the case for most. The process that we are describing in which marginal employment is potentially criminogenic is more likely to occur when the unemployed or secondary sector worker is in the proximity of similarly marginalized individuals. We hypothesize that a social process entailing others who face the same kind of intermittent employment in "bad jobs" encourages the condition that may transform individual potential into actual criminal involvement.

Whether explicitly stated or not, most discussions of the link between work and criminality take a very different tact than that just described. More often than not, the linkages rest on the assumption that involvement in crime is either a substitute way of making a living for those with low chances for success in legitimate employment or a way of supplementing income for those with low income from legitimate employment. To use Merton's well-known terminology, crime is thus perceived as a form of "innovation" for those whose chances for success by legitimate means are limited. This perspective remains common even though much crime is clearly "non-instrumental" (e.g. vandalism, many acts of violence), and even though, for many law violators, the chances for illegitimate pecuniary success are probably not much better than the chances for pecuniary success by approved and legitimate means. Clearly some elect to pursue illegal income producing activity (Bourgois, 1995; Sullivan, 1989), but this explains a relatively small sub-set of those who engage in crime.

The labor market stratification and crime perspective, in which the effects of individual level factors interact with geographic composition and structural variables, fits

into a broader sociological literature which has shown the effects of labor market changes on rates of other social phenomena and measures of well being (Wilson, 1987; 1997; Massey and Denton, 1993; Kasarda, 1990). Crutchfield (1989) demonstrated that Seattle census tract violent crime rates were positively related to "labor instability," a combination of the unemployment rate and the portion of workers in secondary sector jobs in each tract. Borrowing from dual labor market theory, Crutchfield argued that the stratification of labor into primary and secondary sector jobs not only could be used to explain why some portions of populations were chronically disadvantaged in the labor market, but also in resulting spheres influenced by economic well being, including crime. Explaining chronic disadvantage, especially for racial and ethnic minorities, was one of the objectives of dual labor market theorists (Doeringer and Piore, 1971; Piore, 1975; Kalleberg and Sorensen, 1979).

According to these theorists, marginalized groups are frequently over-represented in secondary sector jobs which are characterized by low pay, high turnover, poor benefits, and limited prospects for the future. Primary sector jobs, those well paid ("family wage" jobs is the current vernacular), good-benefits jobs where employees have a reasonable expectation of future employment and perhaps even promotion, are more open to majority group members. This theoretical connection between race, labor markets and crime was established empirically by Crutchfield's analysis of National Longitudinal Survey of Youth data (1995) in which he found that that the effect of unemployment, as well as the effect of working in the secondary sector in an area dominated by secondary sector employment on involvement in both property and violent crime was stronger for minority group members than whites. This may be because minorities not only are frequently employed in the service sector, but they are also more likely to be employed

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on the margins of this marginal sector of the labor market. Thus when industrial shifts and economic downturns occur, minorities are less likely to get bumped from the primary sector to the secondary sector, but rather from the secondary sector out of the work force to unemployment. The hypothesized mechanisms connecting secondary sector employment and unemployment rates to crime rates were the social bonds specified in control theory (Hirschi, 1969). Secondary sector workers were less likely to bond to jobs that offered them little to lose, and those who were unemployed will obviously have no stake in keeping a nonexistent job. Crutchfield (1989 and 1995) and Crutchfield and Pitchford (1997) found support for this hypothesis.

Crutchfield and Pitchford (1997) found that young adults who spend more time out of the labor force and who are not confident that their jobs would last into the future, two characteristics of secondary sector employment, are more likely to have committed crimes. This was especially the case for people who live in counties with higher than average levels of labor force non-participation by adults. The implication of Crutchfield's (1989) and Crutchfield and Pitchford's (1997) findings is that the existence of a critical mass of people who are not working, or who are marginally employed, has additional criminogenic effects, beyond the effect of individual employment status.

An important aspect of dual labor market theory could not be investigated in Crutchfield's initial analysis of Seattle census tracts. In addition to the sector distribution of individual workers, variations in types of industry and the structure of the local labor market should affect crime rates. Crutchfield and Pitchford reinforce this notion in finding that the effects of job characteristics on crime rates were significant where labor market participation was low, but were insignificant where participation was relatively high. The argument used to interpret this finding relied on the concentration of

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marginally employed people in neighborhoods. But, the analysis was of county

unemployment rates. Clearly the thesis needed to be tested at smaller units of analysis,

ideally something akin to neighborhoods such as census tracts or even block groups.

Crutchfield, Glusker and Bridges (1998) found mixed support for the labor market

and crime hypothesis in their analysis of labor instability and homicide rates in Seattle,

Washington D.C. and Cleveland. While there was a positive relationship between labor

instability and homicide rates Seattle and Cleveland, the explanatory power of the percent

black living in a census tract was so strong in Washington that all other indicators were

insignificant. In Washington it was impossible, using 1990 data, to separate the effects of

percent black and the percent residing in a tract who were unemployed or working in

secondary sector jobs.

Labor Markets, Education, and Crime

It is important to consider how aggregate education level and individual

educational experience fit into theories that explain how the economy influences crime

because many of those directly affected by economic changes, like job-loss, are adults,

while much urban crime is committed by juveniles. An important issue is whether labor-

market shifts in employment opportunities are likely to affect youth in the same way they

affect adults. The only jobs available to most teenagers are secondary sector jobs. While

there is evidence that unstable work is positively related to criminal involvement for

young adults (Crutchfield and Pitchford, 1997), the thesis is strengthened to the extent

that it can also show whether and if they do, how labor market changes affect teenagers.

Three studies (Crutchfield, Rankin, and Pitchford, 1993; Wadsworth, 2000 Bellair,

Roscigno, and McNulty, 2003) have found that the work experience of parents can affect

the school performance of their children, which in turn affects their probability of

delinquency involvement. Crutchfield, Rankin and Simpson, (1993) found a small but

significant indirect effect on delinquency of marginal parental involvement, and

relatively high local joblessness through the academic performance of juveniles.

Wadsworth (2000) found that this link was caused in part by children's diminished

academic expectations, lower feelings of efficacy and less adult supervision when the

parent was employed in a marginal setting. Bellair, Roscigno, and McNulty (2003),

using the Add-Health data, found that parents' labor market experience did indirectly

influence delinquency through school performance. These findings have been interpreted

to mean that children invest less in education when the evidence in front of them, the

work experience of parents and other adults, suggests that "playing by the rules" -- or, to

use Merton's (1949) term, "conformity" -- offers little hope for advancement or material

wealth. For instance, children who grow up in an inner-city neighborhood where few

adults are legally employed may be less likely to believe that getting good grades will

really make a difference for their future. While there are certainly young people who rise

above this dismal image, it is not difficult to believe that children in this circumstance

will have less faith in the power of education in their lives than will children whose

parents' and neighbors' investments in education has obviously paid off.

DATA AND METHODS

The data for this project come from two data sets collected and managed by the

Center For Human Resources Research (CHR) at The Ohio State University. The two

data sets, popularly referred to as the "Children of the NLSY," and the "NLSY97," were

combined with the 2000 census data collected by the Bureau of the Census. As is the

case with the original NLS and NLSY data collection efforts used by many researchers,

the Children of the NLSY and the NLSY97 are funded by and through the Bureau of Labor Statistics (BLS). BLS also maintains proprietary control of these data, which had implications for this project.

Research Design and Analytical Strategy

The Study Design

The project had two phases, and utilizes two different data sources of the NLSY. In the first, the research team analyzed the NLSY data for the cohort of young adults who began being followed in 1997. The second phase involved an analysis of two data sources originating from the NLSY 1979 cohort – the "main file" of respondents, and the "children of the NLSY" data file. Using the most current full sample year available to us, 1998, as cross-sectional data, a merged file of mother (and spouse if available) and her child(ren) was created. In both phases of this project we used the same basic analysis strategy and analytical tools. The variables used in phase two differed somewhat from those used in phase one to reflect the greater information about parents' work experience that is available when the focus is on the children of the initial NLSY sample.

Data Sources

The analysis includes data from three distinct samples of the NLSY surveys. We began by studying young adults from the NLSY 1997 cohort. This cohort is the newest sample of the larger set of surveys called the National Longitudinal Surveys (NLS). The NLSY97 cohort of young men and women is a nationally representative sample of approximately 9,000 youths, ages 12-16, initially assessed in 1997 and followed every year thereafter. It is designed to be representative of the youths living in the United States in 1997 and born during the years 1980-1984. The respondents used in our analyses were between the ages of eighteen and twenty when last interviewed. The

results from these interviews are used as cross-sectional data here.

For our adolescent sample, we used data from two distinct data sources of the NLSY 1979 cohort; both the main file of respondents and their children. We used data from the most current sample year available (1998) for both the main file respondents (NLSY79) and the "Children of the NLSY" sample. These data files were merged in order to gather as much data on both mother and adolescent as possible. The NLSY79 data are taken from an annual longitudinal survey that has followed a sample of about 12,000 males and females that were between the ages of 14 and 21 in the initial year of the survey (1979). This data collection began after the long-term effort to track four cohorts of adults, which began in 1966. The earlier effort, the National Longitudinal Survey of Labor Market Experience (NLS), consisted of cohorts of mature men and women and younger men and women. Respondents used in these analyses are between the ages of fourteen and eighteen years old.

Several features of the NLSY make it appropriate for our purposes. The NLS, and specifically the NLSY79 and NLSY97, were collected to obtain detailed personal and work histories of those in the samples. This detail can be used to try to move beyond the dichotomous characterization of primary and secondary sector jobs (we have used these data for this purpose in previous research—Crutchfield, Rankin and Pitchford, 1993; Crutchfield, 1995; and Crutchfield and Pitchford, 1997). Thus in our analysis we are able to consider characteristics of the job, the respondents' work history, and other personal characteristics. The NLSY79 and the NLSY97 over-sampled Blacks, Latinos and low income Whites to ensure that there were sufficient numbers of them for analyses, but it is possible to weight the sample so that it is representative of the U.S. population. We have not used the weights in the present analyses.

Another feature of the NLSY surveys that made them advantageous for our research purposes is the availability of geo-coded data. All respondents are matched with geo-coded data, at both the county and tract level. Thus, county or tract level census data can be matched to cases as measures of the macro forces that may affect work or crime. In previous work (Crutchfield, Rankin and Pitchford, 1993; Crutchfield, 1995; Crutchfield and Pitchford, 1997) we used county data to test the linkage between macro labor market forces, individual work experience and crime. We recognized then that, in our earlier work, given the thesis we were testing, it would have been ideal to use neighborhood data to examine macro effects rather than county of residence. Due to the fact that census tract data for NLSY respondents are now available, albeit under very controlled circumstances, it was possible to use tract level data for these analyses. These data were not used previously because The Center for Human Resource Research does not release them, even with the confidentiality assurances that they use with the county data. Their justifiable concern is that with the geo-coded data it would be possible to identify respondents. Clearly this concern is magnified when the aggregate data appended to individual respondents is census tract data. Consequently these data can only be used on site at The Center.

We recognize that even census tract data are not ideal for our purposes because they have arbitrarily drawn boundaries, which do not necessarily coincide with communities or neighborhoods, as they are understood by local residents (Messner and Tardiff, 1986). However, while they are approximately the right size, census tracts, though not perfect, provide the opportunity to study the multilevel influence of the labor market on crime (Elliot, 1999). By using census tracts as proxies for neighborhoods we can study the effects of individual labor market experience imbedded in neighborhoods.

We believe that a complete understanding of how employment affects crime requires this type of in-depth approach.

As noted above, we also used data from the "NLSY Young Adults" project (a subset of the Children of the NLSY). This project, which began in 1994, has been collecting detailed information on the school experiences, work histories and criminal behavior of the children of female NLSY79 respondents. Many of the questions concerning school, job training, employment, and criminal behavior are very similar to those used in the original NLSY79 questionnaire. These data allowed us to connect the delinquent behavior of individuals not just to their own work and school experiences, but to those of their parents. These interviews are conducted every two years, however, for our purposes we only used the most current wave of data available for both mother and adolescents – which is the 1998 data wave.

Analytic strategy

The analytic strategy was governed by the two distinguishing characteristics of the proposed research. First we took advantage of the detailed employment history and occupational characteristics in the NLSY. This means that we attempted to move beyond the simplified models used by Crutchfield and Pitchford (1997), to measure occupational characteristics. Towards this end a large number of occupational characteristics and work history variables were used individually in preliminary analyses and they were also used to develop scales. Our intent was to use these measures in a series of Ordinary Least Squares (OLS) regressions, path models, and OLS regressions with interaction terms included. The second distinguishing characteristic of the work is the linking of

individual or micro level analysis, with aggregate analyses, at the macro level.[4]

The present research improved on the Crutchfield and Pitchford (1997) analysis in two important ways. First, we used the census tract-level data rather than the county data. Our reason for doing this is that the theory, the labor stratification perspective, makes a more compelling argument for the importance of the neighborhood characteristics as determinants of the style patterns of residents than does the county in which they lived. This is not to say that macro processes at the county level, such as the distribution of types of industries that characterize local labor markets, are not important, but the understanding that we get from including that larger aggregate (Crutchfield and Pitchford, 1997) is enhanced by consideration of the neighborhood. Elliot (1999) demonstrates the reasonableness of using census tracts to study neighborhood processes.

The NLSY county data can be used off site (away from the CHR) when researchers have approval of the Bureau of Labor Statistics (BLS). However, use of the census tract data is more restricted to protect the anonymity of respondents. Therefore, the census tract geo-codes can only be used at the offices of CHR at Ohio State University in Columbus. This regulation has been put in place by BLS. Members of this research team made two trips to Columbus to work with the CHR staff and to develop a plan for using these data. The research team agreed to pay to have a research assistant (RA) employed at CHR to work with us to ready the data for our analyses. As a member of the CHR staff, that RA had access to the geo-coded data. The University of Washington research team used the individual level data sets (in Seattle) to construct

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[4] The research team recognizes that many scholars studying multiple level processes today use Hierarchical Linear Modeling (HLM) rather than OLS. Had we not had the (reasonably imposed) data access restrictions that are described below we no doubt would have considered using HLM. We recognize that some of our results could possibly be biased by violation of the OLS independence assumption. In recognition of this potential we endeavor to interpret our data conservatively. Also, while multiple respondents live in some census tracts, the number of respondents living in any particular tract is small, limiting the degree of any bias in our results.

scales and indices and conducted preliminary analyses. We purchased copies of the 2000

U.S. Census of the Population on CD –Rom from Geolytics Inc. a list of census tract

variables, lists of the individual (NLSY) variables, and the SPSS syntax to construct new

scales and indices was then sent to the RA at CHR. She then created the new variables,

and merged the census tract data to the two individual data sets using CHR's NLSY geo-

codes for respondents. The RA then computed eight sets of correlation matrices. There

were sets for matrices for each of the two NLSY data sets (the Children of the NLSY and

the NLSY97) and for each of those data sets there were matrices for respondents who

lived within SMSAs, those who resided in the Central Cities of SMSAs, and respondents

who lived outside of SMSA. Each of the eight correlation matrices, in addition to

descriptive data for the two full data sets was then sent to BLS for approval. In order for

the research team to have access to the matrices, all output has to be approved by BLS to

guarantee that the anonymity of the NLSY's respondents was not compromised. After

receiving BLS approval, the matrices were sent to the University of Washington research

team and the matrices were used to conduct this research.

We felt that this elaborate procedure was the best option because the census tract

data provide an important opportunity to test the labor stratification thesis. An important

part of that thesis argues that when neighborhoods have relatively high proportions of

marginally employed people it negatively affects the community which in turn increases

the likelihood of crime in that community. This notion is consistent with the arguments

of Wilson (1987; 1997) and research by criminologists (Sampson and Groves, 1989;

Allen and Steffensmeier, 1989). Also, using census tract data permitted us to study how

the extent to which neighborhoods had high percentages of one racial group (Massey and

Denton, 1993) interacts with individuals' work and occupational characteristics to

influence criminality. These analyses can be conceptualized as nesting individual characteristics, in neighborhood (census tract) characteristics, which in turn are nested in the larger settings of metropolitan areas, central cities, and non-metropolitan areas.

Variables

It is most useful to describe sets of concepts that were used as data in each level of the analysis. In much of the analysis multiple indicators are used to measure these concepts. Below we describe the major concepts that were used. We used the wealth of data in the NLSY, to select the specific variables to be used in the measurement models.

Separate dependent variables were constructed for the two samples, young adult and youth, which we used in this study. The young adult crime/delinquency scale used the following items. Respondents were asked to answer yes or no as to whether they had engaged in each of these items since the last interview (the past year). There was one exception which asked if they ever had engaged in a behavior. This item is noted below. The items included are: carried a gun, purposely destroy property, steal anything $50 or less in value, steal anything greater than $50 in value including cars, commit other property crimes, attack anyone to hurt or fight, sell illegal drugs, been arrested, and **ever** belonged to a gang. Respondents' mean score on these items was used as our young adult dependent variable if they answered at least eight of the items.

The following items were used to create the delinquency index for the juvenile analyses: skipped school without permission, damaged property of others on purpose, gotten into fight at work or school, taken something without paying for it, taken something worth under $50 not from a store, used force to get money from someone, hit/seriously threatened someone, attacked someone to hurt/kill, tried to con someone, taken a vehicle without permission of the owner, broke into a building/vehicle to

steal/look, knowingly held/sold stolen goods, helped in a gambling operation, hurt someone enough to need a doctor, lied to parents about something important, and parent had to come to school. All of these items asked about the behaviors in the past year. The mean of respondents' answers to these questions was used as their delinquency score if they answered at least eight of the questions (were not missing values).

Data for individual respondents include: current job characteristics (e.g. occupation, income, subjective assessment of the job, employment benefits), family income, academic history (including current status, school performance, and highest grade completed), social-demographic characteristics (age, sex, race, marital status, number of children), parents' marital status, family structure (with a focus on who the respondent lives or lived with), family's poverty status, family's welfare receipt, parents' education, and parents' occupations and employment characteristics. There were significant missing values for many of the variables of theoretical interest. When that was the case, values were imputed using the most conservative option. In most instance, the mean was imputed, which works against obtaining statistically significant results (all imputed values are noted in Appendices A and B). In instances we imputed values other than the mean when it could be substantively justified. For example if fathers' or step fathers' education was omitted we imputed this value based on mothers' education. Where variables with imputed values are used, a dummy variable indicating the cases with imputed values was included in the analyses to control for any bias introduced.

Census tract data including unemployment rate, occupational distribution, median family income, and median income for major race and ethnic groups was also used. Also in the data set are census tract labor market participation, age structure, racial composition, crowding, percent below poverty, percent on welfare, high school drop out

rate, high school graduation rate, home ownership, percent renting, and residential mobility.

RESULTS

Labor Markets, Employment and Young Adult Criminality

The first part of our analyses uses the portion of the NLSY97 data with respondents who are eighteen years old who had left high school by the time of their interview, and respondents who are nineteen or older. Specifically, eighteen year olds who are still in high school are not included in this analysis. They are represented in the analyses below using the Children of the NLSY data (those analyses are designed for school aged "children," while the present focus is on young "adults"). Respondents who are nineteen and older have been kept in the analyses even if they continue in secondary school. The reason for this inclusion decision is that many, perhaps even most, eighteen year olds who have not yet graduated are continuing in a pre-adult status that begins to change when they leave school. Nineteen year olds who are still in high school are in a more ambiguous status; of the age of an adult, should have left school, but have not. We elected to study them with young adults because of this ambiguity and we will control for their school status throughout.

Table 1 presents the results from two Ordinary Least Squares Regression (OLS) models.[5] Model one contains sets of individual variables. Model two adds a set of neighborhood characteristics to the individual variables. The individual variables included in these analyses are; background or socio-demographic characteristics—sex, age, race, ethnicity, and marital status; parental or family of origin social class indicators—father's highest grade completed and parental income; respondents'

education—a dummy variable indicating if they are currently in high school, and if they were ever suspended from school.[6]

The final set of individual level variables is of primary interest for this study, characteristics of respondents' employment. The first of these variables is a measure of the number of weeks worked in the year preceding the interview. There are two measures of job quality; "marginal employment" is a combination of two variables of interest, if they are employed in a secondary sector job and if they were unemployed at the time of the interview. Secondary sector jobs are differentiated from primary sector jobs. The former tend to be low skill, low paid jobs, with limited or no employment benefits (such as health care or paid vacations). Secondary sector jobs also tend to be unstable and those who have them have a high likelihood of employment instability. Primary sector jobs, by contrast, are the "family wage jobs" that are frequently mentioned during political campaign seasons. Though these jobs too may require only limited skills (e.g. some low level factory work), workers are, relative to secondary sector workers, well compensated and there is a degree of employment stability. Here secondary sector employment and unemployment are combined into a single indicator because the former are frequently in and out of the labor force and whether they are coded as secondary sector workers or unemployed is for many simply a matter of which status they happen to be when interviewed. We have combined them in this way to be consistent with research on neighborhoods that studied the relationship of labor instability (the proportion of adult residents who were marginally employed—unemployed and secondary sector work) and census tract violent crime rates (Crutchfield, 1989). In subsequent tables we present OLS

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[5] The means and standard deviations for all variables in these analyses are presented in Appendix C.
[6] In previous work (Crutchfield and Pitchford, 1997) school suspension was included as a control variable to take into account prior involvement in deviant behavior. We include this variable here for the same

results that include unemployed and secondary sector employment rather than marginal

employment variable so that maximum information on individuals' work status is

available.

The second job quality measure is the occupational status of respondents' current

employment. This is a categorical variable ranging from 1 for executives to 5 for the

unemployed (farm workers were coded as the lowest employed category, a 4).[7]

We experimented with a great many possibilities for measuring the quality of

employment including measures of benefits, job satisfaction, income, type of pay (hourly

versus salaried), etc.[8] These alternatives, which were invariably highly correlated with

secondary sector employment and occupational status, were used individually and in

combination as scales. We also included them in early stages of the analyses, but they (1)

did not perform as well as the two measure of quality that we retained, and (2) were too

highly collinear.

Three neighborhood variables are retained in the final analyses (more were used

in early stages of this project), the percent black, the percent Hispanic, and neighborhood

disadvantage. The last variable, which was described above in detail, is included to

capture the extent to which a census tract displays the qualities frequently referred to as

"underclass neighborhoods." A number of interaction terms that were designed to assess

the extent to which the individuals' employment circumstances influence their crime

involvement in conjunction with influences of neighborhoods' economic and social

conditions were included in earlier phases of the analysis. None of these interactions

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reason, but we will also note its effects on delinquency because of the potential policy implications for
school administrators.
[7] The unemployed were given a score for the occupational status variable so that they could be kept in the
analyses.
[8] Other characteristics that were examined were: benefits—health care, vacations, paid sick leave; job
autonomy; respondents' characterizations of job responsibility, job satisfaction, and length of employment.

were significant. These non-findings are important when considered with the results of previous research (Crutchfield and Pitchford, 1997) and with the results of the juvenile analyses, and these results disconfirm one of our hypotheses. What we believe these contradictory findings mean will be discussed below.

Table 1 presents the models for analyses of the full sample (minus eighteen year olds who are still in high school). Table 2 repeats this analysis except that the combined variable, marginal employment is replaced by its two component variables, unemployed and secondary sector employment. Tables 3 through 5 are tables with identical structures as Table 2 (includes unemployment and secondary sector employment) except they are for three sub-samples of the NLSY97 respondents. Table 3 includes the analyses using respondents who reside in census tracts that are located within Standard Metropolitan Statistical Areas (SMSAs). Table 4 present analyses of respondents who live in the Central Cities of SMSAs. Here central city should not be confused with "inner city." All SMSAs have one or more core cities within them. Central City refers to these core cities, not to the ghettos, slums, and barrios popularly referred to as the inner city. Table 5 displays the results for the 525 respondents who live outside of SMSAs. These individuals do not necessarily live in rural areas, but we will refer to them that way for the sake of brevity and because these tracts are relatively more rural than those within metropolitan areas.

The results of these analyses are modest, but they are also, for the most part, consistent with the hypothesized link between labor market participation and criminal involvement, with a notable exception. In the analyses of the full sample (Table 1) the coefficient for the variable of primary interest, marginal employment, is significant in the predicted direction. Those who are in this marginal employment circumstance are more

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involved in criminal behavior. Neither the number of weeks worked, nor occupational status are significant in any of the models, but theoretically we would expect both of these indicators to be linked to employment in the secondary sector and both are in fact correlated with job sector.

Contrary to our predictions, neighborhood disadvantage is not significantly associated with criminal behavior after individual characteristics and circumstances are taken into account. Neither is the percent Hispanic who live in neighborhoods. Notably as the percent of African Americans residing in neighborhoods increases respondents are significantly less likely to have engaged in crime. While the strength of this association is weak it is important because of ongoing debates about race and crime. Individuals' circumstance appears more important than the racial composition of neighborhoods. We should be careful though because this linear measure may mask what happens in communities that are hyper-segregated (Massey and Denton, 1993).

The results for two of the other sets of variables are worthy of note. Respondents who continue as high school students are marginally less likely to have been involved in crime. Readers should remember that the typical eighteen year old, high school senior is not included in this sample, so the high school students are nineteen or older. One might reasonably expect that these students are people who had academic difficulty somewhere along the way. These results are interesting because in spite of this earlier "educational difficulty," their continued involvement in secondary education is linked to lower levels of criminal involvement. Also, those who have ever been suspended from school are substantially more likely to be involved in crime. School suspension, is in fact the strongest predictor of criminal involvement for the respondents in this sample (stronger even than sex). This is important for two reasons. First, the net effect of the employment

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variables' relationship to crime should be seen in the context that this measure of previous bad behavior, suspension, has been taken into account. So, we can be reasonably assured that the observed effects of employment are not simply the spurious results of those with low self-control being both less likely to maintain employment and to be more likely to engage in crime. Second, when considered with the more modest, but significant negative association between continuing as a high school student and crime among this group, a serious question should be raised about the policy of suspending unruly students. These results suggest that even for students who have had some difficulty (that are still in high school past age eighteen), keeping them involved, which would seem to be antithetical to suspension as a punishment, appears to be more effective as a crime prevention strategy. We acknowledge that keeping troublesome students in school is a problem for teachers and administrators, but for the communities in which these students live, as well as for the student, it may be for the best. We will explore the nature of school attachment and involvement among school aged children below.

The other set of variables that we should take substantive note of are those measuring the respondents' family SES. Scholars and policy makers who focus on cultures of poverty explanations of crime, to the exclusion (or minimization) of the individual's social circumstance or community structural conditions, would argue that many who come out of low SES families will carry with them values of the lower class making them more likely to become involved in crime. The lack of significant results for our two measures of familial social class, fathers' educational attainment and parental income, when education and employment are taken into account, are inconsistent with this argument. We are not saying that values, or growing up in "underclass

neighborhoods" do not have an effect on crime and delinquency, but these results call into question the simpler expressions of the culture and income arguments about the etiology of crime. Consistent with this doubt, the interaction term, individual employment with neighborhood disadvantaged, was not as we predicted significant in the analyses of the full sample.

Finally a few words about the background variables are in order. Sex and age are, as is usually observed, significantly associated with crime. Males and younger respondents are more likely to commit crimes. Neither the race nor ethnicity measures matter much in the prediction of crime for this sample. Being African American is marginally significant ($p < .1$), but in the opposite direction most frequently observed. We should not make much, if anything, at this level of significance.

As one would expect the results displayed in Table 2 are essentially unchanged except where marginal employment has been replaced by variables indicating that respondents were either unemployed or working in a secondary sector job. There are some minor, inconsequential coefficient changes. The results for the two broken out employment variables are consistent with the arguments made earlier but provide somewhat stronger support for the labor stratification and crime thesis than the combined marginal employment variable. Young adults who are out of work and those who are employed in secondary sector jobs are significantly more likely to have been involved in crime. For those who may think that some job is better than no job, these results indicate that, at least for crime protection, that is only part of the story. Unemployment has a slightly stronger relationship to criminal involvement than employment in the secondary sector (primary sector employment is the omitted variable), but for our purposes it is important that both are significantly positively related to criminal behavior.

Tables 3 through 5 present the results of similarly structured analyses for the sub-samples. The general patterns of results are similar to those for the full sample, but there are notable and important differences. The relationships between the two employment variables, unemployment and secondary sector employment, and crime are negligibly stronger in the SMSA sample (Table 3) than in the full sample, but they are substantially stronger for respondents living in Central City (Table 4) neighborhoods (central city unemployment, $b = .060$ vs. $b = .036$ in the full sample; and .030 and .013 respectively for secondary sector employment). In rural tracts (Table 5) neither unemployment nor secondary sector employment predicts criminal involvement. Marginal employment's effect on criminality appears to be an urban phenomenon. The strongest association is in the Central City and the work variables are unrelated to crime in non-metropolitan census tracts.

Neighborhood disadvantage significantly predicts individual criminality in the Central City sub-sample ($p < .1$). Obviously this is not the traditional .05 level of significance, but the N for this sub-sample is relatively small (927) and this is an aggregate variable in an individual level analysis so we believe it is worthy of note. This effect, net of individual circumstance, is important because it points to the negative influences on the behavior of young adults when they reside where many are relegated to the margins of the society and economy. It is also important because so few studies have found any significant influence of neighborhood context on individual involvement in crime.

While the results that were just discussed support the labor stratification and crime thesis (except in rural areas), the analyses of the interaction between individuals' work circumstance and neighborhood disadvantage was not, as predicted, related to crime

in any of the samples. This is also contrary to results reported by Crutchfield and

Pitchford (1997) who found that young adults who were out of work more often had

higher criminal involvement when they lived in counties that had higher than average

unemployment rates, but marginally employed people living in counties with low rates of

unemployment were no more likely to engage in crime than other similarly situated (e.g.

educational attainment, sex, race, age) individuals. The results reported here, when

considered along with those reported by Crutchfield and Pitchford suggests that local

labor market vitality may condition the relationship between individual employment

marginality and crime, but that neighborhood disadvantage does not condition that

relationship. This makes intuitive sense. Adults are not constrained to their

neighborhoods and neither are their life chances and employment opportunities. For

them living where a local labor market provides better or worst employment

opportunities makes the difference.

The neighborhood measures are a bit more important in the urban sub-samples as

well. The negative association between criminal involvement and respondents' living in

tracts where there are more African Americans is essentially equal in metropolitan areas

(b = -.27) as in the full sample (b = -.29). In the central city neighborhoods though the

negative association is stronger (b = -.44) and it is insignificant in rural tracts. In

metropolitan neighborhoods, respondents who live among more African Americans are

less involved in crime net of other factors, including their family SES, their employment

circumstance, and of the individual's race or ethnicity. Also, living in a disadvantaged

neighborhood has a net positive influence when the comparison is among those living in

central cities.

The other notable difference for the sub-sample analyses from that of the full

sample is in the education variables. While school suspension remains the best predictor

of criminal behavior, the marginal positive influence of continuing in high school after

one is nineteen years old that is observed in the full sample is only present when marginal

employment is in the equation (Table 1) and not when that variable is replaced by

unemployment and secondary sector employment (Table 2). Also, among the sub-

samples this relationship is only marginally significant (b = -.042; p < .1) only in the

SMSA tracts. Obviously not much should be made of these findings, but they do suggest

that it really is the employment circumstance, more so than their continuing status as

students, that inhibits criminal involvement. This may be an area that future research,

focused on school effects, might be able to clarify if, how and when high school

enrollment limits criminality for those beyond traditional school age.

Summary

To summarize we return to our original broad research questions. The two

questions that are relevant for the analyses of the young adult data are:

1.   How do employment and job qualities effect individual (both adult and

juvenile) involvement in crime?

2.   How do neighborhood characteristics effect individual involvement in

criminal behavior and how is the relationship between individuals'

employment and criminal involvement conditioned by neighborhood

characteristics (both adult and juvenile)?

There is a modest relationship between employment and criminal involvement for

young adults. Those who were working were less likely to have reported that they had

engaged in criminal behavior in the year prior to their interview. Also, young adults who

are employed in secondary sector jobs, those positions that are more marginal to the labor

market, are more likely to have committed criminal violations; in rural areas though employment is unrelated to criminal involvement. In metropolitan census tracts the opposite is the case. Having a job is important, but so too is the quality of the employment. Respondents who were unemployed or working in secondary sector jobs are more likely to have engaged in criminal behavior than those employed in the primary sector or those who continue as students.

Our analyses designed to answer the second research question found that neighborhood characteristics had limited direct influence on the criminality of those living within a census tract. There is a weak negative association between living among more African Americans and criminal involvement in metropolitan neighborhoods and a suggestion that living in disadvantaged tracts of central cities might be criminogenic net of individual characteristics. We hypothesized that employment effects would be conditioned by neighborhood disadvantage. We did not find this to be the case. While Crutchfield and Pitchford (1997) observed that employment's influence on crime depends on the level of unemployment in the local labor market in which they lived, counties, this is not the case for neighborhoods. Neighborhood characteristics appear to have less influence (net of individual characteristics) on young adult criminality than the amount of work that is available in local labor markets.

One might draw two policy implications from these analyses. First, when government agencies report on job creation, they should not represent to the public that all jobs are created equal. Some pay well, have good benefits, and help individuals, families build for the future and inhibit crime. Others do not pay well or offer benefits, provide little or no future prospects, and do not appear to have the same crime inhibiting influence as primary sector jobs. The health of communities and the lives of individuals

would be better served by distinguishing between fluctuations in these kinds of jobs.

The second policy implication regards efforts to uplift communities. Some have stressed the importance of economic development within disadvantaged neighborhoods. These analyses, combined with earlier findings, suggests that this is not as important as creating job opportunities in the broader local labor market and making sure that men and women from distressed neighborhoods have opportunities to get good, primary sector jobs.

Labor Markets, School, and Delinquency

Table 6 presents the OLS analyses from the Mothers and Children of the NLSY. This is our juvenile sample. Here respondents' delinquency is regressed on four background variables[9]; sex (male = 0, female = 1), age, race (white = 0, black = 1), and ethnicity (non-Hispanic = 0, Hispanic = 1); two parental socio-economic status variables, family poverty (below the poverty line = 0, above the poverty line = 1), and mother's education; respondents' school variables, attachment to school, grades, and parental involvement; whether the respondent was employed; mother's employment (no = 0, yes = 1); neighborhood variables, percent black, percent Hispanic, neighborhood disadvantage, percent marginal work force (a combination of percent of adults unemployed and the percent of adults employed in secondary sector occupations), and the percent of the population over 25 without a high school diploma. It was our hope to evaluate the nature of parents' work, but with too few fathers present in the homes of respondents it was not possible to fully examine their work circumstance; in primary or secondary sector jobs. And given the continued gendered nature of the work place we are not at all certain that a mother working in a secondary sector job will have the same meaning for the household and for children. Many of the jobs traditionally occupied by women are considered

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secondary sector jobs, especially for the women, disproportionately poor and working class, overrepresented in the NLSY samples.

The first model in Table 6 (and in the tables that follow) is the analysis with individually measured variables. The second model introduces the neighborhood variables. Later we will present models that include interaction terms (between individual level and neighborhood variables). This table is of the full sample. Subsequent tables (Tables 7 through 9) present similar analyses for sub-samples of respondents who live in metropolitan areas, the central cities of metropolitan areas (as described in the description of the young adult analyses this is not a euphemism for "ghettos," but rather the core cities of SMSAs), and respondents outside of metropolitan areas. Again, the latter respondents do not all technically reside in "rural areas," but we use that term for ease of discussion to indicate those residing in relatively non-urban places. Many of the initial results for each of the sub-samples do not differ appreciably from those in the full sample, but we find in the analyses of interaction terms notable differences. So, the results of the sub-samples will be described only where they diverge substantively from the full sample.

To begin we should note that here too the results are modest. The R^2 for Model 1 is .08 and goes up to only .084 when the neighborhood variables are added. We would note that frequently analyses of crime using the NLSY do not report a large R^2,[10] but there are significant results worthy of reporting. First we should note that juvenile employment is unrelated to delinquency when other factors, notably those having to do

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[9] See appendix A and B for detailed descriptions of variables.
[10] The NLSY probably yields very modest results in criminological research for several reasons. The most obvious possibilities are: even though these are reasonably large samples crime is a rare event, the crime measures are highly skewed, many of the theoretically important explanatory variables have significant numbers of missing cases (have been coded conservatively, usually imputing the mean) and as is the case with such surveys, the proximate causes of criminal events are not measured by the survey.

with school, are a part of the analysis. This finding is important for two reasons. Earlier research has reported a positive relationship between youth employment and delinquency (e.g. Greenberger and Steinberg, 1986) and many have wondered about this relationship. Warren, LePore and Mare (2000) have argued and presented data that suggests that the previous research did not adequately take into account how much a child was working and their relationship to school prior to employment. When they took these factors into account they report that juveniles who were already not attached to school and those who worked longer hours were more likely to be involved in delinquency, but that those who had good grades and worked more modest hours were actually less likely to be involved in criminal behavior. Our results, while not as detailed as Warren's and his colleagues', are consistent with their findings. We find no measurable relationship between youth employment and delinquency when school attachment and grades are taken into account. The second reason that this result is notable is that this does suggest that youth employment is not necessarily the panacea for dealing with delinquency, but rather it is school attachment and getting good grades that are important protective factors that inhibit delinquency. Youth who are working do not appear to be less likely to be involved in delinquency than those who do not work.

Another non-finding that is important is the absence of a direct relationship between mother's employment and juvenile delinquency. Contrary to some popular arguments, a working mother does not appear to lead to her child's delinquency. Presumably a lack of adequate supervision is a by-product of maternal employment resulting in juvenile criminal behavior. We cannot here measure the level of parental supervision, but the lack of a direct relationship between maternal employment and crime can be conservatively interpreted to mean that we might want to worry less about the

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effects of her work and focus instead on the amount or quality of parental involvement (as well as the family's poverty status as will be discussed below).

What does matter as predictors of criminal involvement for the juveniles in this sample is, not surprisingly, family poverty and school. Both respondents' attachment to school (b = -.225, p < .001) and grades (b = -.023, p<.01) are significant direct predictors of delinquency. Neither of these results is surprising. Control theorists have long argued and demonstrated empirically that both of these variables lead to "school bonding," which makes it less likely that students with good grades and who feel an attachment to school will become delinquents (Hirschi, 1969; Jenkins, 1997).

Family poverty also significantly predicts delinquency. Others (Tittle, et al; 1978) have argued that delinquency is not related to SES, especially when self-report data are used (Hindelang, et al; 1979). We do not think that our results are necessarily contradictory. Here we have found that those in poor families are more likely to be involved in delinquency. It may well be that the poor have higher levels of delinquency than others, but that there is not a linear relationship between crime and social class. Working class children probably are no more criminal than those from the middle and upper classes. Perhaps only with the substantial disadvantage that comes from being poor, is delinquency more likely. The question that remains for this project, and which we will take up shortly, is what if any indirect effects do parental employment and neighborhood characteristics have on delinquency through these two important school variables.

It is no surprise that the neighborhood variables have little direct effect on delinquency. Others have found the same results. The only direct relationship is with the percent of the census tracts population that are Hispanic. In those tracts that have

relatively larger proportions of Latino residents the respondents report less involvement in delinquency. This effect is small but statistically significant. We expect that other neighborhood effects will show up in the analyses of interaction effects and as indirect influences through other individual characteristics. Both the analyses of interactions and path models will be presented below.

The results of the sub-samples (Table 7—SMSA, Table 8—Central City, and Table 9—Rural) are very similar to the results from analyses of the complete sample. The smaller sample sizes for the sub-samples likely accounts for respondents' grades dropping out as a significant predictor of delinquency in the SMSA and Central City analyses. We do not believe that this insignificance should be over-interpreted to mean that grades are unimportant, because "attachment to schools," which is correlated with grades (r = .064, p < .05) remains significant even where the Ns are considerably smaller. Grades remains significant in the rural sub-sample, where it is a notably stronger predictor of delinquency (b = -.047, p < .05) than in the full sample (b = -.023), suggesting that in these neighborhoods grades are in fact a better determinant of who is likely to become involved in illegal activity than in metropolitan settings.

There are two other modest, but notable differences in the analyses of the sub-samples from that of the full sample. The first is the weak negative relationship of mothers' education (b = -.043, p < .1)[11] in census tracts that lie within SMSAs. The second is that family poverty is insignificant in the Central City sub-sample. In that sub-sample the coefficient (b = .145) is not appreciably lower than the that from the analyses of the full sample (b = .166, p< .01), and slightly larger than the coefficient for the metropolitan tracts (b = .127, p < .05), but with the much smaller N (475) this variable

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[11] We felt that the small sample size justified using the less-traditional, more liberal standard of significance of .1.

fails to achieve significance, even at the .1 level in the analyses of Central City tracts.

More importantly, family poverty is a much stronger predictor of delinquency in rural

tracts than in metropolitan tracts when other factors are taken into account (b = .426, p <

.01). This finding is at variance with popular images of impoverished poor inner-city

families being the spawning grounds of a sub-culture of poverty leading to delinquency.

These non-urban places are where poverty is more observable as a direct cause of crime.

Readers should though remember that these and other results should be interpreted

conservatively since we have used OLS rather than HLM, but in general we have

confidence that familial poverty is an important predictor of delinquency no matter where

a juvenile lives.

Of the aggregate variables, percent Hispanic is joined by percent black as weak

negative predictors of individual criminality, but both are only significant in the SMSA

and Central City sub-samples, and not in the rural tracts.

Indirect Effects and Interactions

Figures 1 through 4 present path models that have been generated by a series of

OLS analyses. The models are based on the regression analyses described above. We

felt that it was useful to conduct and display path models, in addition to the interaction

effects analyses, for the juvenile sample because our initial hypotheses emphasized the

indirect effects of parental and neighborhood employment and education through the

respondents' educational experiences. All of the variables included in the regressions

results reported above were included in these analyses, but two variables, age and sex, are

not displayed here to simplify presentation of the models. The exogenous variables;

mother's education, race and ethnicity, if a spouse was present in the home, and family

poverty, are placed to the left in the model because these are factors that frequently

influence the type of neighborhood that a family will be able to live in. The next group

of variables is the census tract measures that were included in the initial OLS models.

We hypothesized that the exogenous variables and neighborhood variables would predict

mothers' employment and parental involvement in school. The reason for the first

prediction is straightforward, but our reasons for the second should be elaborated. We

are arguing that parental involvement in their child's school will be influenced by

community ecological conditions, not because of cultural values in those

neighborhoods,[12] but because of demands and stresses on those who live in

disadvantaged places. This is not to say that we believe that values are unimportant in

determining parental school involvement. In fact we do expect that such values will exist

and will have an influence. But, such belief systems are not measured in the NLSY.

When interpreting our results we will speculate about how we think that structural

circumstance will influence belief systems and in turn actions that are important in many

of these communities. The final grouping of predictor variables in the models is grades,

school attachment, and youth employment.

The structure of these figures is a bit unorthodox. We have adopted a

presentation strategy designed to facilitate comparisons between the analyses of the full

sample (Figure 1) and the three sub-samples. Also, because of the number of variables

and paths, we represent positive associations with solid lines and negative relationships

with doted lines. In Figures 2 through 4, red lines indicate changes from the full-sample

analyses. Red lines with a ball, rather than an arrow at the end indicate that the path was

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[12] Again, we are not arguing that such values are not present in some parents and more broadly in some neighborhoods, but they are not measured in the NLSY, and the authors believe that the existence of and importance of such values tend to be too frequently overstated in research that can not measure them. Value orientations have been observed and discussed in a number of ethnographic studies that are discussed elsewhere in this report.

significant in the full-sample model, but is insignificant in the present one. Red lines

with arrows indicate a significant relationship in the analysis of a sub-sample that was not

observed in the full-sample.

The direct relationships have been described above; here we will focus on indirect

influences on delinquency. Although we find some significant relationships predicting

endogenous variables; the very modest results are disappointing. Mothers' employment

and parental involvement in the school have measurable indirect effects on criminal

involvement. Mothers who worked were more likely to have children employed (Beta =

.069, p < .01) and their children are likely to have lower grades (Beta = -.063, p < .05),

but the indirect effects of mother's employment on delinquency through grades is only

.004. Most test of stratification theories use the occupational circumstance of the father.

We have not done that here since this NLSY sample follows the mothers who were

respondents in the original NLSY and detailed information on too many of the fathers or

step fathers is not available. This is in part because too many of the fathers are not with

the mothers and their children. Had we been able to consider more fully both parents'

occupational circumstance it would have been a better test of the labor stratification and

crime thesis. While mothers' employment predicts juvenile employment the latter does

not affect delinquency. Even though the indirect effect of mother's employment on

delinquency is modest we should note here that this means that when mothers are

employed outside of the home their children's grades suffer so mothers' employment

does have a very small indirect effect increasing the delinquency of their children through

school performance. But, before tempting anyone to get carried away with interpreting

this observation we should acknowledge that the mothers who are employed tend not to

live in disadvantaged neighborhoods, are better educated, and are less likely to be in poor

households. Children who are poor are more delinquent, but not because their mothers are working. Their mothers are less likely to be in the labor market which is in fact consistent with the labor stratification thesis prediction. Family poverty also depresses grades (Beta = -.089, p < .001), so it has a total effect on delinquency of .085.

The net positive effect of parental involvement in their child's school increases grades (Beta = .087, p < .001) and child's attachment to school. (Beta =. 237, p < .001) and has a total effect on delinquency of .049. Parents' school involvement is significantly predicted by mothers' education (Beta = .134, p < .001), if a spouse is present in the home (Beta = .060, p < .05), and the race of the juvenile where these results indicate that net of other variables in the model, minority parents are more likely to be involved (Black—Beta = .141, p < .001; Hispanic—Beta = .089, p < .05).

The combination of the findings for mothers' employment and parental involvement in school may mean that any negative effects on grade performance of a mother's employment might be mitigated by her school involvement. The increased employment of the children of working mothers may be because these children of "better off" mothers may be more likely to work because where they live jobs for teenagers are more plentiful. Less well off youths, particularly those living in the most blighted inner-city neighborhoods have fewer employment opportunities. The working women are more educated, less likely to be in impoverished families, less likely to live in disadvantaged neighborhoods. One must remember though that because of the NLSY's initial sampling design that women in lower SES categories were over-represented so the mothers who are the basis of the "Children of the NLSY" data set disproportionately are drawn from more humble backgrounds. So, in all likelihood, we are not talking about a lot of highly educated women when we say that they are relatively more educated. Parental

involvement, itself a function of mother's education, race and ethnicity, and the presence of a spouse, influences delinquency through both grades and the school attachment of respondents.

In general, neighborhood characteristics matter little once individual characteristics have been taken into account, with one notable exception. The level of neighborhood disadvantage, a measure that combines measures of census tracts economic and social distress, depresses the employment of mothers (Beta = -.168, p < .001), which in turn influences grades and youth employment. But, since mother's employment leads to lower grades, it actually appears that disadvantage has a very weak, distant indirect, positive relationship on grades.

We should note the influence of the exogenous variables. Being black or Hispanic has a positive net effect on school attachment and black juveniles are more likely to work. As might be expected, the presence of a spouse in the home diminishes the chances that the family will live in predominantly black, disadvantaged neighborhoods, with high dropout rates, and where a relatively large proportion of workers are marginally employed. Those with spouses are more likely to live in tracts with a relatively larger percentage of Latino residents. Family poverty, which has a direct effect on delinquency, also has an indirect effect by depressing grades and making it less likely that the mother is employed.[13] The total net effect of family poverty should be noted.

The results for the sub-samples reflect what is seen in the original OLS analyses

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[13] Obviously there is a link between the family's poverty status and the employment of the mother and the latter will influence the former. We elected to pursue this ordering with poverty predicting employment for several reasons. First, the initial sample of the NLSY over sampled low-income respondents. Second, by making mother's education exogenous we felt that to some extent that this controlled for the direction of the influence. Finally, we felt that the best representation of the theory suggested that employment would be influenced by the location where a mother lived which was in turn influenced by where they could afford to live.

of juveniles in the models based on the full sample. Some of the significant paths drop out, we suspect due to smaller Ns. Some significant effects on employment patterns though appear and the array of these results in particular sub-samples is interesting. Notably in the portion of the sample living in SMSA tracts, in urban areas as the percent black increases, the number of mothers who are employed increases. We cannot make too much of this, because the indirect effect of mother's employment and delinquency disappears because the observable association between grades and delinquency is insignificant at the .05 level (likely because of the smaller N), but it leads us to speculate about how much of the higher youth crime and lower achievement that has been observed in black neighborhoods is a result of higher levels of employment among these women. Of course it may be that these women are adapting to the tough choice of working for their families' sustenance and leaving their children less supervised in problematic environments.

In the model for Central City tracts having a spouse present is positively associated with mother's employment (as is her education), and that employment is negatively associated with family poverty and neighborhood disadvantage. While the result described in the above paragraph would seem an indictment of working moms, this pattern suggests that such a conclusion may be too hasty. This pattern suggests central city families with two parents, at least one of which is employed after having achieved a relatively higher level of education and avoiding disadvantaged neighborhoods, are maximizing what they are doing for their families. This picture is more complicated than we hypothesized and suggested by some other scholars. We will try to sort some of this out below with the analyses of interaction terms.

The Rural tracts model is interesting for what is not there. Moms' employment

has no real effect on either crime or school and while it is positively associated with mothers' education, it is negatively related to the presence of a spouse in the home. Here we have a much simpler picture. In these tracts mothers are more likely to work when they are single parents and children are more likely to be delinquent when they are poor and not doing well in school.

It is interesting to compare the results of the simpler pattern observed in the rural tracts with the more complex picture displayed for those in the central city. In the former the presence of a man in the house means that women are less likely to be employed outside the home, but just the opposite is the case in central city neighborhoods. Obviously these observations are insufficient to make much of them, but when you consider that the initial NLSY sample disproportionately sampled the economically disadvantaged (along with over-samples of blacks and Latinos) the picture starts to emerge of strong families; traditional one employed parent households outside of the city and hard working, probably two career families in the cities.

In general, the results of both the OLS analyses and the path analyses of the juvenile sample suggest rather limited support for the labor stratification thesis. As predicted, school matters in predicting the criminal involvement of school aged youth, but the neighborhood variables, with the exception of descriptors for racial and ethnic composition, and in a small way neighborhood disadvantage, matter little, and while mother's employment matters for grades it does not for the more reliable predictor of delinquency, school attachment. But, we are convinced by the analyses of interaction effects that to dismiss the thesis at this point would be premature. We turn now to those results.

The next series of tables (Tables 10 through Table 14) present analyses of the

same models described above, but with the addition of key interaction terms. The interaction terms selected for inclusion were constructed to test the labor stratification and crime argument that employment and disadvantage in the neighborhood and parents' work circumstance affect delinquency through school variables that have a direct influence. These tables are structured the same as those for the initial OLS analyses (Model 2 in the earlier tables—includes the neighborhood variables). The differences are that the sub-samples are included on the same page and the last variable in each table is the interaction variable included in each particular test.[14]

Table 10 includes an interaction term for grades and living in a disadvantaged neighborhood. This interaction is positively correlated with delinquency. This means that in more disadvantaged neighborhoods the effect of having grades as a protective factor against delinquency is muted. Presumably the negative social environment of these communities causes good students there to be more involved in delinquency than good students elsewhere. Also, poor students in disadvantaged neighborhoods are, again likely as a result of a more criminogenic environment, still more likely to be involved in delinquency then good or average students in their own neighborhoods or elsewhere. Conversely, children who do poorly in school but live in more affluent neighborhoods have a more heightened likelihood of becoming delinquent than classmates with good grades, but there poor school performance does not hurt them as much as it does students in disadvantaged communities. Here, as we will see below, the quality of the neighborhood does matter. This effect is somewhat stronger in the SMSA sub-sample, and even more pronounced among Central City neighborhoods. But, we do not see a significant interaction effect in rural communities. Again, the story of delinquency seems

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[14] We tested a large number of interaction effects that were theoretically justified. We have selected from the statistically significant effects the ones that we believe are substantively most interesting. We did not

to be a bit simpler and straightforward there.

A similar set of analyses is presented in Tables 11 and 12. Here the interaction terms are computed using grades and the percentage of marginal workers (the sum of the percent unemployed and the percent employed in secondary sector jobs) who reside in neighborhoods; and grades and the percentage of the population without a high school diploma. These effects are similar to that described above (for grades and disadvantage), but the interactions are significant only in the full sample and in the SMSA sub-sample. They are insignificant in the Central City and Rural tract sub-samples, but the unstandardized coefficients are similar to that for the full-sample, suggesting that perhaps they are sinignificant because of small sample sizes. What is notable is the stronger effect of this interaction in SMSA tracts. Doing well in school does not insulate students from delinquency in those communities where a relatively large proportion of workers are marginally employed or without a high school education. Conversely, in neighborhoods that are not characterized by these problems, children who are not performing well in school mitigate some of the positive influences of living in non-disadvantaged neighborhoods where adults have more stable employment, and are more likely to have finished at least secondary school.

The final two interaction terms focus on how parental behavior is conditioned by neighborhood context. Table 13 displays the results from an analysis that adds an interaction term computed by multiplying parental involvement in their child's school and the percent of the population without a high school diploma. Our results indicate that the positive effects of parental involvement are diminished when families live among more adults who have not successfully completed high school. Perhaps if the neighborhood undervalues education the parents' efforts to be involved in their children's

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select these interactions based on the strength of the association.

schools are mitigated.

Table 14 presents the analysis of an interaction term that combines mothers'
employment and neighborhood disadvantage. Readers should remember that in the
earlier analyses there was the suggestion that mother's employment had an indirect
positive influence on delinquency because it seemed to be associated with lower grades.
This interaction term is not significant in three of the models, but it is for the Central City
analysis. Meaning that in the urban core, just the opposite of that suggestion is the case.
Working mothers mitigate some of the negative effects of growing up in disadvantaged
neighborhoods. This adds additional support for the interpretation that we offered above
that the households with workingwomen in the city seemed to be families striving to
overcome a problematic situation.

Summary

Here again, we will use our research questions to guide the summary of the results
described above. The three research questions (questions 3, 4, and 5) that focus on
juvenile delinquency are:

3.   How are juvenile employment and education related to delinquency?

4.   How do parents' labor market and education experiences affect
        juvenile delinquency?

5.   Which, if any, neighborhood characteristics are associated with
        juveniles' involvement in crime? And, how are the relationships
        between juveniles' employment and educational experiences
        conditioned by characteristics of the neighborhoods that they live in?

When other factors are taken into account, the employment of juveniles has no
measurable effect on delinquency. By contrast, the educational experience, most notably

attachment to school, and to a lesser extent respondents' grades, does modestly predict who engages in illegal activity. Adolescents who report being more attached to school report less delinquency and those who do not do as well in school are more likely to have been law violators. Also, family poverty is positively related to delinquency.

Parental employment does not have a direct influence on delinquency, but it influences it indirectly through young peoples' school experience. Also, parental involvement in their child's school, which is incidentally positively related to maternal education, indirectly affects delinquency through educational attachment and grades.

Neighborhood disadvantage negatively influences mother's employment. But the other neighborhood variables do not have real substantive effects on delinquency of children in the sample.

Our analyses did find several notable conditional effects. The influence of grades on delinquency is conditioned by neighborhood disadvantage, the proportion of residents who are marginal to the labor market, and the proportion of adults who hold high school diplomas. Children who get better grades experience less protection from delinquency when they live in difficult neighborhoods as measured by these variables. Parental involvement is also conditioned by the educational achievement of neighbors. Where fewer finished high school, parental involvement in their children's schools is less likely to prevent delinquency. Finally, mothers' employment, a significant influence on respondents' school experience is conditional on neighborhood disadvantage. Her employment has greater value on delinquency prevention in distressed residential areas.

DISCUSSION and CONCLUSIONS

These results indicate that the structure of the labor market does influence

individual criminality. More generally, the structure of disadvantage influences the likelihood that both young adults and juveniles will engage in law violating behavior. We should be careful to recognize that the results of these analyses are modest, but this is not a surprise. Past analyses using NLSY data to study crime (as well as some other outcomes) have also been modest.

Three general results from this research should be emphasized. First, the employment circumstance of young adults, and the educational circumstance of juveniles, matter as determinants of their criminality. Second, the educational circumstance of children is, in part, modestly influenced by their parents' educational, employment, and economic circumstance. Third, the influence of school on juveniles' delinquency is conditioned by where they live, both by the character of their neighborhood and their place of residence vis-à-vis urban areas, but neighborhood circumstances do not appear to condition the effect of work on young adult criminality.

This project was undertaken in part to gain an understanding of how labor market processes influence crime and delinquency. A number of scholars, perhaps most notably William Julius Wilson, have argued that the substantial deindustrialization that took place in the U.S. during the 1970s and '80s, and which continues today albeit at a slowed rate,[15] caused a number of social problems, including increased crime. Wilson and others argued that these crime increases would occur in neighborhoods that were characterized by relatively large numbers of people excluded from meaningful work, but the mechanisms that would lead to increased crime in this circumstance were not elaborated. Criminologists know that adult blue collar workers laid-off from traditional manufacturing jobs in the steel, auto, and other manufacturing industries are not likely to

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[15] With lowered levels of industrial activity and employment the decreases of either could not obviously continue at the rates of several decades ago.

turn to crime. Most of those who were laid-off during the economic downturns of earlier decades, and those who today are put on the streets by the struggles of industries such as aircraft manufacturing, are past the age when crime is likely. We have argued that changes in the labor market will not mean that the laid-off will necessarily have a heightened probability of becoming involved in crime, but rather that those of succeeding generations, without the prospects of high quality, stable employment, are in some circumstances more crime prone. Here we have found that having a job, and a higher quality job, makes a difference in determining who is likely to break the law.

For younger people, it is school that matters. We have known this from past research. But what we have learned here is that the labor market, social, and economic contexts in which children live and study (or, perhaps too frequently, do not study) conditions how their school experience inoculates them from delinquency, and in the case of disadvantaged neighborhoods inoculates them less, in much the same way that quality employment protects young adults. Children who live in economically distressed neighborhoods are more at risk of delinquent involvement even when they are performing well in school. This too is consistent with Wilson. Without adults in their community who are doing well in the labor market as models these children are more at risk then they would be otherwise.

The interaction effects that we observe are reason for real concern. Juveniles in disadvantaged neighborhoods already labor under considerable life burdens. Their families cannot provide materially for them in the way that other children are provided for, their schools are likely to be of lower quality, and they are less likely to graduate into adult networks that will facilitate good (primary sector) job opportunities. Now we find that one of the most stable predictors of lower delinquent involvement, good school

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performance, does less to inhibit delinquency by the children of disadvantaged places. There individual disadvantage is compounded by the disadvantage of their communities.

Finally, a word is in order about the differences we have seen in urban versus more rural settings. The factors we have focused on, jobs and education, matter in both settings, but how they matter is more straightforward outside of the metropolis. This should come as no surprise. There, except perhaps in cases such as Appalachia and some Native American reservations, the poor and marginalized are not as concentrated as they are in large cities. The contextual effects will be minimized without such concentrations. This is not to say that rural poverty does not matter in the production of criminality; clearly it does. But in these settings it appears to be the poverty of a person's family that matters, rather than the situation of the community around them.

It is important to recognize that in urban areas, even though the effects are modest, context matters. These neighborhoods, whether segregated by race, or having large numbers of the marginally employed or generally disadvantaged people, do not have independent direct effects on crime and delinquency. But such living circumstances do contextualize the effects of juveniles' educational experience on their law breaking behavior. With adults it seems that neighborhoods matter far less then the local labor market in which they find themselves. Past research reported that the quality of work was conditioned by the level of unemployment in counties. People who spent more time out of work and living where unemployment was relatively high were more crime prone, but individuals spending just as much time out of work were not participating in more crimes then others where unemployment was low. This difference between neighborhoods' effects on juveniles and young adults may seem curious, but we think it is understandable, even if we did not predict it. The community that matters for children,

because of restrictions on their mobility, is the neighborhood they live in (and perhaps the one they may be bussed to for school). For adults on the other hand, especially when they are looking for work, the community that matters is the larger local labor market. For them this might be the city, the county, or even larger geographical areas, but they are not as constrained as children to the neighborhood. So, place matters differently for adults and children as a contributor to their criminality. Work matters, school matters, and so too does the character of the places where people live and with whom they live.

To conclude, we would like to offer the following suggestions for research and public policy. Regarding research, the current quest by a number of researchers to find, identify, and understand the effects of social context on criminality should be encouraged. This search is going on, but these effects when they are found have been modest and frequently researchers have found no effect. We should not prematurely abandon the search, nor should we conclude that the lack of direct effects means that context does not help to explain crime, or is of little importance. To the contrary, our finding modest contextual effects using the NLSY, which is notorious for yielding small effects in studies of crime, should be seen as affirmation that context matters and should continue to be a focus of study.

Because context appears to matter, we should be aware in future studies on relationships between work and crime that the nature of this relationship, and even whether it will exist or not, may well be dependent on where a study takes place. Our results suggest that the effects of work on crime will be more observable in some places (cities) than in others (non-metropolitan areas), and in some settings (where there are high levels of unemployment) but less so elsewhere (where there is more relative affluence).

We have not studied public policies here, but the implications of our results for policy may be worth considering. First, some have posited that the way to combat juvenile delinquency is to make sure that jobs for young people are available. We are not prepared to say that this is not true to some extent; rather we want to emphasize the primacy of school and educational experience as delinquency prevention. If youth employment programs are used, perhaps they should be designed so that they encourage good school performance rather than serve as a competitor with schools for a young person's energies and focus.

This research also suggests that working against forces that are now reducing the number of "family wage jobs" is potentially an important way to reduce crime. Employing mothers and fathers in good jobs has a positive affect on their children and on their communities. It is easier to suggest this policy than to deliver on it. But our work may serve as a warning that to continue on the path toward the reduction of manufacturing jobs, with their primary sector character, and the shift towards service sector jobs, with their secondary sector characteristics, may well work against maintaining the low levels of crime and delinquency (compared to some earlier decades) currently experienced in the United States. Perhaps creative policy minds can discover means to encourage service sector employers and the leaders of the burgeoning "information economy" to convert jobs and create new positions with more primary sector characteristics, that is jobs that adults and families can live and thrive on.

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Table 1 – Regression of Crime Index on Individual and Tract Level Variables – NLSY97, Wave 3, Full Sample N=2934: Standardized &*Unstandardized* Coefficients & St Errors[16]		
	Model 1	**Model 2**
Background Variables		
Female	-.141***	-.141***
	-.033	*-.033*
	(.004)	(.004)
Age	-.044*	-.046*
	-.009	*-.010*
	(.004)	(.004)
Black	-.035^	-.001
	-.009	*-.000*
	(.005)	(.007)
Hispanic	-.026	-.011
	-.007	*-.003*
	(.006)	(.007)
Married	-.006	-.006
	-.004	*-.003*
	(.011)	(.011)
Parental SES Variables		
Father's Highest Grade	.029	.028
	.001	*.000*
	(.001)	(.001)
Parental Income	-.010	-.009
	.000	*.000*
	(.000)	(.000)
School Variables		
In High School	-.037^	-.038^
	-.010	*-.011*
	(.005)	(.005)
Ever Suspended	.186***	.186***
	.044	*.044*
	(.005)	(.005)
Work Variables		
Weeks Worked in Last Year	.003	.003
	.000	*.000*
	(.000)	(.000)
Marginal Employment	.044*	.045*
	.011	*.011*
	(.005)	(.005)
Occupational Status	.028	.028
	.003	*.003*
	(.003)	(.003)

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[16] Here and in subsequent tables the first entries are Betas, the second b, and the third are standard errors

Neighborhood Variables		
% Black		-.071*
		-.029
		(.013)
% Hispanic		-.030
		-.016
		(.014)
Disadvantage		.036
		.004
		(.003)
Constant	---	---
	.203	.216
	(.077)	(.077)
R Square	.072	.074

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 2 – Regression of Crime Index on Individual and Tract Level Variables – NLSY97, Wave 3, Full Sample N=2934: Standardized &*Unstandardized* Coefficients & St Errors[17]

	Model 1	Model 2
Background Variables		
Female	-.142***	-.142***
	-.033	*-.033*
	(.004)	(.004)
Age	-.043*	-.045*
	-.009	*-.010*
	(.004)	(.004)
Black	-.037^	-.002
	-.010	*-.000*
	(.005)	(.007)
Hispanic	-.026	-.011
	-.007	*-.003*
	(.006)	(.007)
Married	-.003	-.003
	-.002	*-.002*
	(.011)	(.011)
Parental SES Variables		
Father's Highest Grade	.030	.028
	.001	*.001*
	(.001)	(.001)
Parental Income	-.009	-.008
	.000	*.000*
	(.000)	(.000)
School Variables		
In High School	-.028	-.030
	-.008	*-.008*
	(.006)	(.006)
Ever Suspended	.185***	.184***
	.044	*.044*
	(.005)	(.005)
Work Variables		
Weeks Worked in Last Year	.010	.010
	.000	*.000*
	(.000)	(.000)
Unemployed	.069*	.069*
	.036	*.036*
	(.014)	(.014)
Secondary Sector	.052*	.053*
	.012	*.013*
	(.005)	(.005)
Occupational Status	.001	.001
	.000	*.000*
	(.003)	(.003)

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[17] Here and in subsequent tables the first entries are Betas, the second b, and the third are standard errors

Neighborhood Variables		
% Black		-.071*
		-.029
		(.013)
% Hispanic		-.031
		-.017
		(.014)
Disadvantage		.035
		.004
		(.003)
Constant	---	---
	.208	*.221*
	(.077)	(.077)
R Square	.074	.076

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 3 – Regression of Crime Index on Individual and Tract Level Variables – NLSY97, Wave 3, SMSA Sample N=2409: Standardized &*Unstandardized* Coefficients & St Errors

	Model 1	Model 2
Background Variables		
Female	-.145***	-.144***
	-.033	*-.033*
	(.005)	(.005)
Age	-.040^	-.042*
	-.008	*-.009*
	(.004)	(.004)
Black	-.020	.013
	-.005	*.003*
	(.006)	(.008)
Hispanic	-.039^	-.030
	-.011	*-.008*
	(.006)	(.008)
Married	.010	.011
	.006	*.007*
	(.012)	(.012)
Parental SES Variables		
Father's Highest Grade	.031	.029
	.001	*.001*
	(.001)	(.001)
Parental Income	-.012	-.011
	-.000	*-.000*
	(.000)	(.000)
School Variables		
In High School	-.041^	-.042^
	-.012	*-.012*
	(.006)	(.006)
Ever Suspended	.173***	.173***
	.041	*.041*
	(.005)	(.005)
Work Variables		
Weeks Worked in Last Year	.027	.027
	.000	*.000*
	(.000)	(.000)
Unemployed	.083**	.083**
	.043	*.043*
	(.016)	(.016)
Secondary Sector	.075**	.074**
	.018	*.017*
	(.005)	(.005)
Occupational Status	-.003	-.002
	-.000	*-.000*
	(.003)	(.003)

Neighborhood Variables		
% Black		-.068*
		-.027
		(.014)
% Hispanic		-.023
		-.012
		(.015)
Disadvantage		.034
		.004
		(.003)
Constant	---	---
	.190	*.203*
	(.085)	(.085)
R Square	.075	.076

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 4 – Regression of Crime Index on Individual and Tract Level Variables – NLSY97, Wave 3, Central City Sample N=927: Standardized & *Unstandardized* Coefficients & St Errors		
	Model 1	**Model 2**
Background Variables		
Female	-.187***	-.190***
	-.044	*-.044*
	(.008)	(.008)
Age	-.008	-.015
	-.002	*-.003*
	(.007)	(.007)
Black	-.061	.005
	-.014	*.001*
	(.010)	(.013)
Hispanic	-.110*	-.087^
	-.029	*-.023*
	(.011)	(.013)
Married	.008	-.007
	.005	*-.004*
	(.021)	(.021)
Parental SES Variables		
Father's Highest Grade	.007	.005
	.000	*.000*
	(.001)	(.001)
Parental Income	.004	.009
	.000	*.000*
	(.000)	(.000)
School Variables		
In High School	-.047	-.049
	-.013	*-.014*
	(.010)	(.010)
Ever Suspended	.147***	.138***
	.035	*.033*
	(.008)	(.008)
Work Variables		
Weeks Worked in Last Year	.024	.028
	.000	*.000*
	(.000)	(.000)
Unemployed	.140**	.132*
	.064	*.060*
	(.024)	(.010)
Secondary Sector	.129**	.125**
	.031	*.030*
	(.009)	(.009)
Occupational Status	-.043	-.038
	-.005	*-.005*
	(.005)	(.005)

Neighborhood Variables		
% Black		-.134*
		-.044
		(.019)
% Hispanic		-.049
		-.023
		(.022)
Disadvantage		.084^
		.008
		(.004)
Constant	---	---
	.098	.133
	(.135)	(.135)
R Square	.099	.105

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 5 – Regression of Crime Index on Individual and Tract Level Variables – NLSY97, Wave 3, Not In SMSA (Rural) Sample N=525: Standardized &*Unstandardized* Coefficients & St Errors		
	Model 1	**Model 2**
Background Variables		
Female	-.133**	-.134**
	-.031	*-.031*
	(.010)	(.010)
Age	-.064	-.063
	-.014	*-.014*
	(.010)	(.010)
Black	-.118*	-.094
	-.031	*-.025*
	(.013)	(.018)
Hispanic	.117**	.111*
	.053	*.051*
	(.020)	(.023)
Married	-.050	-.049
	-.030	*-.030*
	(.027)	(.027)
Parental SES Variables		
Father's Highest Grade	.008	.008
	.000	*.000*
	(.002)	(.002)
Parental Income	.009	.007
	.000	*.000*
	(.000)	(.000)
School Variables		
In High School	-.004	-.002
	-.001	*-.001*
	(.013)	(.013)
Ever Suspended	.224***	.223***
	.054	*.054*
	(.011)	(.011)
Work Variables		
Weeks Worked in Last Year	-.061	-.064
	-.000	*-.000*
	(.000)	(.000)
Unemployed	.029	.029
	.017	*.017*
	(.035)	(.036)
Secondary Sector	-.023	-.022
	-.005	*-.005*
	(.011)	(.011)
Occupational Status	.003	.002
	.000	*.000*
	(.007)	(.007)

Neighborhood Variables		
% Black		-.030
		-.014
		(.039)
% Hispanic		.009
		.010
		(.056)
Disadvantage		-.005
		-.001
		(.009)
Constant	---	---
	.322	.320
	(.183)	(.184)
R Square	.122	.123

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

	Model 1	Model 2
Table 6 – Regression of Delinquency Index on Respondent, Parent, and Neighborhood Variables – Mothers and Children of the NLSY, 1998 Wave, Full Sample N=1497: Standardized &*Unstandardized* Coefficients & St Errors		
Background Variables		
Female	-.163***	-.165***
	-.225	*-.228*
	(.035)	(.035)
Age	-.035	-.036
	-.018	*-.018*
	(.014)	(.014)
Black	.007	.031
	.009	*.043*
	(.043)	(.054)
Hispanic	.003	.045
	.005	*.074*
	(.047)	(.059)
Father or Step-Father Present	-.030	-.026
	-.044	*-.038*
	(.039)	(.039)
Parental SES Variables		
Family Poverty	.080**	.079*
	.166	*.165*
	(.054)	(.054)
Mother's Education	-.051	-.052
	-.044	*-.045*
	(.023)	(.023)
School Variables		
Attachment to School	-.182***	-.184***
	-.225	*-.228*
	(.032)	(.032)
Grades	-.067**	-.065**
	-.023	*-.023*
	(.009)	(.009)
Parental Involvement in School	.022	.020
	.035	*.032*
	(.042)	(.042)
Youth Work Variables		
Employed	.013	.011
	.017	*.015*
	(.038)	(.038)
Mother's Employment Variables		
Mother Employed	.002	.005
	.003	*.007*
	(.039)	(.039)

Neighborhood Variables		
% Black		-.058 *-.134* (.097)
% Hispanic		-.083* *-.262* (.114)
Disadvantage		.036 *.023* (.029)
% Marginal Work Force		.005 *.002* (.015)
% of Population over 25 with no High School Degree		.018 *.131* (.203)
Constant	---- *.803* (.226)	---- *.822* (.228)
R Square	.080	.084

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 7 – Regression of Delinquency Index on Respondent, Parent, and Neighborhood Variables – Mothers and Children of the NLSY, 1998 Wave, In SMSA Sample N=1167: Standardized &*Unstandardized* Coefficients & St Errors

	Model 1	Model 2
Background Variables		
Female	-.150***	-.154***
	-.203	*-.209*
	(.039)	(.039)
Age	-.025	-.024
	-.013	*-.012*
	(.016)	(.015)
Black	.002	.049
	.003	*.068*
	(.049)	(.059)
Hispanic	-.008	.042
	-.013	*.065*
	(.051)	(.064)
Father or Step-Father Present	-.065 *	-.058^
	-.092	*-.083*
	(.043)	(.044)
Parental SES Variables		
Family Poverty	.065*	.063*
	.127	*.123*
	(.059)	(.059)
Mother's Education	-.051^	-.055^
	-.043	*-.042*
	(.025)	(.026)
School Variables		
Attachment to School	-.157***	-.159***
	-.194	*-.197*
	(.037)	(.037)
Grades	-.048	-.045
	-.016	*-.015*
	(.010)	(.010)
Parental Involvement in School	.007	.004
	.011	*.006*
	(.047)	(.047)
Youth Work Variables		
Employed	.031	.019
	.043	*.069*
	(.042)	(.043)
Mother's Employment Variables		
Mother Employed	.008	.012
	.012	*.018*
	(.044)	(.044)

Neighborhood Variables		
% Black		-.105* *-.224* (.103)
% Hispanic		-.108** *-.324* (.125)
Disadvantage		.045 *.028* (.031)
% Marginal Work Force		.027 *.012* (.017)
% of Population over 25 with no High School Degree		-.013 *-.092* (.231)
Constant	---- *.786* (.255)	---- *.819* (.256)
R Square	.068	.076

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 8 – Regression of Delinquency Index on Respondent, Parent, and Neighborhood Variables – Mothers and Children of the NLSY, 1998 Wave, Central City Sample N=475: Standardized &*Unstandardized* Coefficients & St Errors

	Model 1	Model 2
Background Variables		
Female	-.163***	-.173***
	-.232	*-.247*
	(.065)	(.065)
Age	-.045	-.046
	-..023	*-.024*
	(.026)	(.026)
Black	-.036	.025
	-.052	*.036*
	(.089)	(.107)
Hispanic	.009	.089
	.014	*.143*
	(.098)	(.118)
Father or Step-Father Present	-.102	-.090
	-.147	*-.130*
	(.069)	(.070)
Parental SES Variables		
Family Poverty	.076	.071
	.145	*.103*
	(.091)	(.093)
Mother's Education	-.024	-.024
	- .021	*- .021*
	(.041)	(.042)
School Variables		
Attachment to School	-.129**	-.136**
	-.169	*-.178*
	(.062)	(.062)
Grades	-.031	-.024
	-.011	*-.008*
	(.016)	(.016)
Parental Involvement in School	.042	.032
	.067	*.051*
	(.078)	(.079)
Youth Work Variables		
Employed	.097^	.087^
	.138	*.125*
	(.071)	(.073)
Mother's Employment Variables		
Mother Employed	.027	.034
	.041	*.052*
	(.072)	(.073)

Neighborhood Variables		
% Black		-.138^ *-.265* (.146)
% Hispanic		-.157* *-.467* (.198)
Disadvantage		.093 *.049* (.042)
% Marginal Work Force		-.025 *-.011* (.030)
% of Population over 25 with no High School Degree		.026 *.169* (.339)
Constant	---- *.967* (.424)	---- *1.013* (.427)
R Square	.073	.087

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 9 – Regression of Delinquency Index on Respondent, Parent, and Neighborhood Variables – Mothers and Children of the NLSY, 1998 Wave, Rural Sample N=330: Standardized &*Unstandardized* Coefficients & St Errors

	Model 1	Model 2
Background Variables		
Female	-.166**	-.172**
	-.241	*-.249*
	(.078)	(.079)
Age	-.056	-.059
	-.029	*-.031*
	(.030)	(.030)
Black	.016	- .104
	.025	*-.163*
	(.104)	(.142)
Hispanic	.016	.054
	.035	*.120*
	(.120)	(.155)
Father or Step-Father Present	.085	.082
	.133	*.127*
	(.096)	(.096)
Parental SES Variables		
Family Poverty	.159**	.158*
	4265	*.425*
	(.144)	(.145)
Mother's Education	-.069	-.064
	-.067	*-.062*
	(.053)	(.058)
School Variables		
Attachment to School	-.276***	-.284**
	-.342	*-.351*
	(.067)	(.068)
Grades	-.118*	-.114*
	-.047	*-.046*
	(.022)	(.022)
Parental Involvement in School	.065	.065
	.111	*.109*
	(.092)	(.093)
Youth Work Variables		
Employed	-.047	-.041
	-.068	*-.059*
	(.084)	(.085)
Mother's Employment Variables		
Mother Employed	.003	.005
	.004	*.008*
	(.084)	(.084)

Neighborhood Variables		
% Black		.149 *.506* (.326)
% Hispanic		-.047 *-.198* (.325)
Disadvantage		.005 *.004* (.092)
% Marginal Work Force		-.024 *-.014* (.043)
% of Population over 25 with no High School Degree		.02834 *.203* (.445)
Constant	---- *.753* (.495)	---- *.738* (.507)
R Square	.166	.177

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

	Full Sample N=1497	In SMSA N=1167	Central City N=475	Rural N=330
Table 10 – Regression of Delinquency Index on Respondent, Parent, Neighborhood, and the Interaction of Grades and Disadvantage – Mothers and Children of the NLSY, 1998 Wave, All 4 samples: Standardized & _Unstandardized_ Coefficients & St Errors				
Background Variables				
Female	-.165***	-.154***	-.176***	-.171**
	-.228	*-.209*	*-.252*	*-.247*
	(.035)	(.039)	(.065)	(.079)
Age	-.037	-.023	-.039	-.065
	-.019	*-.012*	*-.020*	*-.034*
	(.014)	(.015)	(.026)	(.030)
Black	.029	.047	.030	-.101
	.041	*.065*	*.043*	*-.159*
	(.053)	(.059)	(.106)	(.143)
Hispanic	.044	.040	.092	.054
	.071	*.062*	*.148*	*.120*
	(.059)	(.064)	(.118)	(.155)
Father or Step-Father Present	-.029	-.064*	-.098*	.086
	-.042	*-.091*	*-.141*	*.135*
	(.039)	(.044)	(.070)	(.097)
Parental SES Variables				
Family Poverty	.080**	.063*	.069	.161**
	.166	*.124*	*.132*	*.432*
	(.054)	(.059)	(.091)	(.146)
Mother's Education	-.049^	-.050	-.017	-.068
	-.043	*-.042*	*.015*	*-.066*
	(.023)	(.026)	(.042)	(.055)
School Variables				
Attachment to School	-.182***	-.156***	-.133**	-.284***
	-.225	*-.194*	*-.174*	*-.351*
	(.032)	(.037)	(.062)	(.068)
Grades	-.077**	-.058^	-.074	-.124*
	-.027	*-.019*	*-.026*	*-.050*
	(.009)	(.010)	(.018)	(.023)
Parental Involvement in School	.018	.002	.029	.064
	.029	*.003*	*.046*	*.108*
	(.042)	(.047)	(.079)	(.093)
Youth Work Variables				
Employed	.010	.017	.079	-.038
	.014	*.023*	*.112*	*-.056*
	(.038)	(.043)	(.073)	(.085)
Mother's Employment Variables				
Mother Employed	.004	.012	.038	.004
	.006	*.018*	*.057*	*.006*
	(.039)	(.044)	(.073)	(.085)

Neighborhood Variables				
% Black	-.058	-.105*	-.149^	.144
	-.135	*-.225*	*-.285*	*.489*
	(.097)	(.103)	(.146)	(.328)
% Hispanic	-.081*	-.104*	-.155*	-.053
	-.256	*-.314*	*-.459*	*-.224*
	(.114)	(.124)	(.197)	(.328)
Disadvantage	.181*	.225*	.328*	.098
	.117	*.135*	*.173*	*.089*
	(.050)	(.053)	(.075)	(.159)
% Marginal Work Force	.006	.029	-.017	-.024
	.003	*.012*	*-.008*	*-.014*
	(.015)	(.017)	(.030)	(.043)
% of Population over 25 with no High School Degree	.018	-.014	.016	.027
	.131	*-.095*	*.108*	*.196*
	(.203)	(.230)	(.339)	(.446)
Interaction Terms				
Grades*Disadvantage	.158**	.197*	.258*	.095
	.020	*.023*	*.026*	*.018*
	(.009)	(.009)	(.013)	(.028)
Constant	--	--	--	--
	.811	*.794*	*.887*	*.764*
	(.228)	(.256)	(.430)	(.509)
R Square	.088	.081	.095	.178

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 11 – Regression of Delinquency Index on Respondent, Parent, Neighborhood, and the Interaction of Grades and Percent Marginal Work Force – Mothers and Children of the NLSY, 1998 Wave, All 4 samples: Standardized &*Unstandardized* Coefficients & St Errors

	Full Sample N=1497	In SMSA N=1167	Central City N=475	Rural N=330
Background Variables				
Female	-.165***	-.153***	-.174***	-.172**
	-.228	*-.207*	*-.248*	*-.284*
	(.035)	(.039)	(.065)	(.079)
Age	-.036	-.022^	-.040	-.063
	-.018	*-.011*	*-.021*	*-.033*
	(.014)	(.015)	(.026)	(.030)
Black	.025	.040	.025	-.101
	.036	*.056*	*.036*	*-.159*
	(.054)	(.059)	(.107)	(.143)
Hispanic	.042	.038	.090	.053
	.069	*.058*	*.145*	*.117*
	(.059)	(.064)	(.118)	(.155)
Father or Step-Father Present	-.027	-.061*	-.093^	.086
	-.040	*-.088*	*-.134*	*.134*
	(.039)	(.044)	(.070)	(.097)
Parental SES Variables				
Family Poverty	.079**	.063*	.071	.160**
	.164	*.123*	*.137*	*.430*
	(.054)	(.059)	(.091)	(.145)
Mother's Education	-.048^	-.048	-.016	-.065
	-.042	*-.040*	*.014*	*-.063*
	(.023)	(.026)	(.042)	(.055)
School Variables				
Attachment to School	-.182***	-.158***	-.135**	-.283***
	-.226	*-.195*	*-.177*	*-.351*
	(.032)	(.037)	(.062)	(.068)
Grades	-.064*	-.039	-.030	-.129*
	-.022	*-.013*	*-.010*	*-.051*
	(.009)	(.010)	(.016)	(.024)
Parental Involvement in School	.020	.004	.031	.065
	.032	*.006*	*.050*	*.110*
	(.042)	(.047)	(.079)	(.093)
Youth Work Variables				
Employed	.009	.015	.079	-.038
	.012	*.021*	*.112*	*-.055*
	(.038)	(.043)	(.074)	(.085)
Mother's Employment Variables				
Mother Employed	.003	.010	.038	.003
	.004	*.015*	*.058*	*.005*
	(.039)	(.044)	(.073)	(.085)

Neighborhood Variables				
% Black	-.058	-.105*	-.142^	.145
	-.134	*-.223*	*-.271*	*.491*
	(.097)	(.103)	(.146)	(.327)
% Hispanic	-.081*	-.105*	-.159*	-.049
	-.257	*-.316*	*-.471*	*-.206*
	(.114)	(.124)	(.198)	(.326)
Disadvantage	.041	.053	.090	.008
	.027	*.032*	*.048*	*.007*
	(.029)	(.031)	(.042)	(.092)
% Marginal Work Force	.126^	.183*	.092	.064
	.056	*.078*	*.041*	*.038*
	(.029)	(.031)	(.060)	(.094)
% of Population over 25 with no High School Degree	.021	.016	.025	.029
	.146	*.109*	*.162*	*.217*
	(.203)	(.230)	(.339)	(.446)
Interaction Terms				
Grades*% Marginal Work Force	.137*	.178**	.123	.097
	.012	*.015*	*.010*	*.012*
	(.005)	(.006)	(.010)	(.019)
Constant	--	--	--	--
	.823	*.816*	*.961*	*.740*
	(.228)	(.255)	(.430)	(.508)
R Square	.087	.081	.089	.178

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

	Full Sample N=1497	In SMSA N=1167	Central City N=475	Rural N=330
Background Variables				
Female	-.163***	-.150***	-.169***	-.172**
	-.224	*-.203*	*-.242*	*-.249*
	(.035)	(.039)	(.066)	(.079)
Age	-.036	-.024	-.045	-.058
	-.018	*-.012*	*-.024*	*-.031*
	(.014)	(.015)	(.026)	(.030)
Black	.026	.044	.023	-.096
	.036	*.061*	*.033*	*-.151*
	(.054)	(.059)	(.107)	(.144)
Hispanic	.044	.041	.087	.056
	.071	*.064*	*.140*	*.123*
	(.059)	(.064)	(.118)	(.155)
Father or Step-Father Present	-.027	-.060*	-.090^	.080
	-.039	*-.086*	*-.130*	*.124*
	(.039)	(.044)	(.070)	(.096)
Parental SES Variables				
Family Poverty	.081**	.064*	.071	.156**
	.168	*.126*	*.137*	*.418*
	(.054)	(.059)	(.091)	(.146)
Mother's Education	-.051^	-.053^	-.023	-.063
	-.044	*-.045*	*-.020*	*-.061*
	(.023)	(.026)	(.042)	(.055)
School Variables				
Attachment to School	-.186***	-.163***	-.138**	-.287***
	-.230	*-.202*	*-.180*	*-.355*
	(.032)	(.037)	(.062)	(.068)
Grades	-.130**	-.138**	-.072	-.066
	-.045	*-.046*	*-.025*	*-.026*
	(.015)	(.016)	(.030)	(.035)
Parental Involvement in School	.021	.006	.032	.063
	.034	*.010*	*.052*	*.107*
	(.042)	(.047)	(.079)	(.093)
Youth Work Variables				
Employed	.009	.016	.084	-.039
	.012	*.022*	*.120*	*-.056*
	(.038)	(.043)	(.073)	(.085)
Mother's Employment Variables				
Mother Employed	.005	.015	.036	.007
	.008	*.022*	*.055*	*.011*
	(.039)	(.044)	(.073)	(.085)

Table 12 – Regression of Delinquency Index on Respondent, Parent, Neighborhood, and the Interaction of Grades and Percent of Population with No High School Degree – Mothers and Children of the NLSY, 1998 Wave, All 4 samples: Standardized &*Unstandardized* Coefficients & St Errors

Neighborhood Variables				
% Black	-.056	-.103*	-.138^	.145
	-.129	*-.220*	*-.264*	*.493*
	(.097)	(.103)	(.146)	(.327)
% Hispanic	-.081*	-.106**	-.158*	-.045
	-.257	*-.320*	*-.468*	*-.190*
	(.114)	(.124)	(.198)	(.326)
Disadvantage	.032	.041	.088	.006
	.021	*.025*	*.046*	*.006*
	(.029)	(.031)	(.043)	(.092)
% Marginal Work Force	.004	.025	-.022	-.026
	.002	*.011*	*-.010*	*-.016*
	(.015)	(.017)	(.031)	(.043)
% of Population over 25 with no High School Degree	.141*	.187*	.112	-.072
	.995	*1.305*	*.734*	*-.530*
	(.485)	(.549)	(.932)	(1.156)
Interaction Terms				
Grades*% of Population with no High School Degree	.148*	.211**	.104	-.117
	.169	*.229*	*.112*	*-165*
	(.086)	(.094)	(.172)	(.240)
Constant	--	--	--	--
	.708	*.653*	*.927*	*.812*
	(.235)	(.264)	(.447)	(.519)
R Square	.087	.080	.088	.178

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 13 – Regression of Delinquency Index on Respondent, Parent, Neighborhood, and the Interaction of Parental Involvement and Percent of Population with No High School Degree – Mothers and Children of the NLSY, 1998 Wave, All 4 samples: Standardized &*Unstandardized* Coefficients & St Errors

	Full Sample N=1497	In SMSA N=1167	Central City N=475	Rural N=330
Background Variables				
Female	-.166***	-.154***	-.174***	-.171**
	-.229	*-.210*	*-.249*	*-.248*
	(.035)	(.039)	(.065)	(.078)
Age	-.035	-.025	-.049	-.053
	-.018	*-.012*	*-.025*	*-.028*
	(.014)	(.015)	(.025)	(.030)
Black	.033	.051	.030	-.102
	.046	*.071*	*.043*	*-.160*
	(.053)	(.059)	(.107)	(.141)
Hispanic	.045	.043	.089	.055
	.074	*.066*	*.143*	*.122*
	(.059)	(.064)	(.118)	(.153)
Father or Step-Father Present	-.024	-.058^	-.095^	.099
	-.036	*-.083*	*-.137*	*.155*
	(.039)	(.044)	(.070)	(.096)
Parental SES Variables				
Family Poverty	.081**	.063*	.072	.173***
	.169	*.124*	*.138*	*.465*
	(.054)	(.059)	(.091)	(.145)
Mother's Education	-.052*	-.055^	-.024	-.067
	-.045	*-.046*	*-.021*	*-.065*
	(.023)	(.026)	(.042)	(.054)
School Variables				
Attachment to School	-.181***	-.157***	-.134**	-.272***
	-.225	*-.195*	*-.175*	*-.337*
	(.032)	(.037)	(.062)	(.068)
Grades	-.063*	-.044	-.022	-.108^
	-.022	*-.15*	*-.008*	*-.043*
	(.009)	(.010)	(.016)	(.022)
Parental Involvement in School	-.080^	-.080	-.096	-.107
	-.126	*-.125*	*-.154*	*-.181*
	(.072)	(.081)	(.141)	(.152)
Youth Work Variables				
Employed	.009	.018	.084^	-.047
	.012	*.025*	*.120*	*-.068*
	(.038)	(.043)	(.073)	(.084)
Mother's Employment Variables				
Mother Employed	.003	.010	.030	.004
	.004	*.015*	*.046*	*.007*
	(.039)	(.044)	(.073)	(.084)

Neighborhood Variables				
% Black	-.051	-.098*	-.124	.156
	-.118	*-.209*	*-.237*	*.530*
	(.097)	(.104)	(.147)	(.324)
% Hispanic	-.073*	-.099*	-.140*	-.040
	-.231	*-.298*	*-.417*	*-.168*
	(.114)	(.125)	(.200)	(.323)
Disadvantage	.028	.036	.071	.018
	.018	*.022*	*.038*	*.017*
	(.029)	(.031)	(.043)	(.091)
% Marginal Work Force	.005	.027	-.023	-.023
	.002	*.012*	*-.010*	*-.014*
	(.015)	(.017)	(.030)	(.043)
% of Population over 25 with no High School Degree	.016	.014	.017	.001
	.115	*.096*	*.110*	*.005*
	(.203)	(.231)	(.340)	(.449)
Interaction Terms				
Parental Involvement * % of Population over 25 with no High School Degree	.120**	.101*	.151^	.215*
	1.083	*.897*	*1.935*	*2.045*
	(.399)	(.445)	(.676)	(.854)
Constant	--	--	--	--
	.822	*.825*	*1.062*	*.692*
	(.227)	(.256)	(.427)	(.504)
R Square	.089	.079	.093	.192

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

Table 14 – Regression of Delinquency Index on Respondent, Parent, Neighborhood, and the Interaction of Mother Employed and Disadvantage – Mothers and Children of the NLSY, 1998 Wave, All 4 samples: Standardized &*Unstandardized* Coefficients & St Errors

	Full Sample N=1497	In SMSA N=1167	Central City N=475	Rural N=330
Background Variables				
Female	-.166***	-.155***	-.181***	-.170**
	-.229	*-.210*	*-.258*	*-.246*
	(.035)	(.039)	(.065)	(.079)
Age	-.036	-.023	-.044	-.056
	-.018	*-.012*	*-.023*	*-.030*
	(.014)	(.015)	(.025)	(.030)
Black	.032	.050	.031	-.108
	.046	*.070*	*.045*	*-.170*
	(.054)	(.059)	(.106)	(.143)
Hispanic	.046	.044	.099^	.049
	.075	*.068*	*.159*	*.109*
	(.059)	(.064)	(.118)	(.155)
Father or Step-Father Present	-.024	-.055^	-.085^	.081
	-.035	*-.079*	*-.122*	*.126*
	(.040)	(.044)	(.070)	(.096)
Parental SES Variables				
Family Poverty	.081**	.066*	.071	.151**
	.169	*.129*	*.135*	*.406*
	(.054)	(.059)	(.091)	(.146)
Mother's Education	-.052^	-.054^	-.027	-.067
	-.056	*-.046*	*-.024*	*-.065*
	(.023)	(.026)	(.042)	(.055)
School Variables				
Attachment to School	-.185***	-.159***	-.139**	-.283***
	-.229	*-.198*	*-.182*	*-.351*
	(.032)	(.037)	(.062)	(.068)
Grades	-.065*	-.046	-.027	-.118*
	-.022	*-.015*	*-.009*	*-.047*
	(.009)	(.010)	(.016)	(.022)
Parental Involvement in School	.021	.006	.033	.064
	.034	*.010*	*.054*	*.108*
	(.042)	(.047)	(.079)	(.092)
Youth Work Variables				
Employed	.010	.019	.086^	-.040
	.014	*.026*	*.123*	*-.058*
	(.038)	(.043)	(.072)	(.085)
Mother's Employment Variables				
Mother Employed	.015	.025	.098^	-.020
	.022	*.037*	*.150*	*-.032*
	(.041)	(.046)	(.085)	(.092)

Neighborhood Variables				
% Black	-.053	-.094^	-.109	.156
	_-.121_	_-.201_	_-.209_	_.528_
	(.098)	(.104)	(.148)	(.327)
% Hispanic	-.080*	-.103*	-.145*	-.046
	_-.253_	_-.309_	_-.431_	_-.193_
	(.114)	(.125)	(.198)	(.325)
Disadvantage	.066	.083	.161^	-.091
	_.042_	_.050_	_.085_	_-.083_
	(.033)	(.034)	(.045)	(.122)
% Marginal Work Force	.010	.036	.002	-.013
	_.005_	_.015_	_.001_	_-.008_
	(.015)	(.017)	(.031)	(.043)
% of Population over 25 with no High School Degree	.019	.014	.025	.032
	_.133_	_.010_	_.166_	_.237_
	(.203)	(.231)	(.337)	(.446)
Interaction Terms				
Mother Employed * Disadvantage	-.050	-.069	-.154*	.104
	_-.044_	_-.057_	_-.114_	_.114_
	(.034)	(.036)	(.051)	(.105)
Constant	--	--	--	--
	_.801_	_.785_	_.917_	_.733_
	(.228)	(.257)	(.427)	(.507)
R Square	.085	.078	.097	.180

^ = p < .1
* = p < .05
** = p < .01
*** = p < .001

FIGURES HERE

Appendix A: Source Variables and Descriptions for All Variables in the Analyses

Variable Name	Source Variable from NLSY97	Variable Description
Individual:		
Age	R3876300	Age of Respondent at Interview Date
Sex	R3828700	Sex/Gender of Respondent. Recoded to 0=male, 1=female
Race	R1482600	Combined Race and Ethnicity of respondent. Recoded to dummy variables indicating race: Black and Hispanic.
Father's Highest Grade	R1302400 or R1302500	Father's Highest Grade Completed. Used biological father, or resident father if biological father was missing. Recoded the "ungraded" responses to the mean, and used mother's education to estimate father's if father's was missing.
Father's Highest Grade (flag for imputed data)	Created	A dummy variable used in the analyses to indicate if father's highest grade was imputed. 0=not imputed, 1=imputed.
Parental Income	Sum of: R0492500 R0609800 R0610100 R0610500 R0610800 R0611100 R0611400 R0611700 R0612000 R0612400 R0612700	Our own created yearly income estimate consisting of a sum of the answers to the following 11 questions asked of the respondent's parent on the parental retrospective questionnaire. 1. Total income received from rental property in 1996? 2. During 1996, how much income did you receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? 3. During 1996, how much income did you receive from your own farm, business, partnership or professional practice AFTER EXPENSES? 4. During 1996, how much income did your [spouse/partner] receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? 5. During 1996, how much did your [spouse/partner] receive from [his/her] own farm, business, partnership or professional practice AFTER EXPENSES? 6. What was the total amount of interest and dividend payments [you/you or your spouse/partner] received during 1996, including even small amounts and amounts reinvested or credited to the accounts? 7. What was the total amount of income [you/you and your spouse/partner] received from AFDC or ADC last year? 8. What was the total value of the food stamps [you/you and your spouse/partner] received during 1996? 9. What was the total amount [you/you and your spouse/partner] received from SSI? 10. How much did [you/you or your spouse/partner] receive in child-support during 1996? 11. What was the total amount [you/you and your spouse/partner] received from all other sources (e.g., friends, relatives, royalties or any other regular or periodic source of income) during 1996?
Parental Income (flag for imputed data)	Created	A dummy variable used in the analyses to indicate if parent's income was imputed. 0=not imputed, 1=imputed.
Enrollment in High School	R3881500	Respondent's enrollment in school. Recoded to 1=enrolled in grades 1-12. 0=not enrolled in school, or

		enrolled in grade>12 (i.e college).
Enrollment in College	**R3881500**	**Respondent's enrollment in school.** **Recoded to 1=enrolled in college.** **0=not enrolled in school, or enrolled in grades 1=12.**
Highest Grade Completed by Respondent	**R3884700**	**Respondent's Highest Grade Completed.** **Recoded the "ungraded" responses and the missing values to the mean.** **Recoded the grades to 1=less than high school, 2=high school grad, 3=more than high school.**
Ever Suspended	**R0034900, R1696400, R2988400**	**School suspension. If respondent answered yes to being suspended at any point in the three waves of the survey, suspend=1, if never suspended or missing, suspend=0.**
Marital Status	**R3891300**	**Marital Status. Recoded to 1=married, 0=not married**
Employment Status	**R3703900**	**Employment Status. 1=employed, 0=not employed.**
Total Weeks Worked in 1999	**R3923400**	**Total number of weeks worked in 1999.**
Secondary Sector Employment	**R3871400, R3871500, R3871600**	**Industry Code for Respondent for Job 1-3 (if missing Job 1, used Job 2; if missing Job 2, used Job 3).** **Recoded to dummy terms for Sectors. 1=working in secondary or tertiary sector, 0=not working in the secondary sector.**
Occupational Code	**R3872300, R3872400, R3872500**	**Occupational Code for Respondent for Job 1-3 (if missing Job 1, used Job 2; if missing Job 2, used Job 3).** **Recoded to a nominal scale.** **1=executive, 1.5=imputed for college kids missing occupational code data, 2=technical/sales, 3=administrative (and imputed values for those missing occupational codes and enrolled in high school, in the military, or women with children), 4=farm, 5=unemployed**
Occupational Code (flag for imputed data)	**Created**	**A dummy variable used in the analyses to indicate if the occupational code was imputed. 0=not imputed, 1=imputed**
Aggregate:		
Disadvantage	**Created**	**The result of a factor analysis of 5 tract level variables for each individual: %extremely poor, percent on public assistance, percent of population over 18 living in poverty, total percent not married, and percent that are in the workforce but unemployed.**
Percent Black	**Created**	**Overall percent black living in each tract**
Percent Hispanic	**Created**	**Overall percent Hispanic living in each tract**

Appendix B: Source Variables and Descriptions for All Variables in the Analyses, NLSY79 (Mother and Child Dataset)
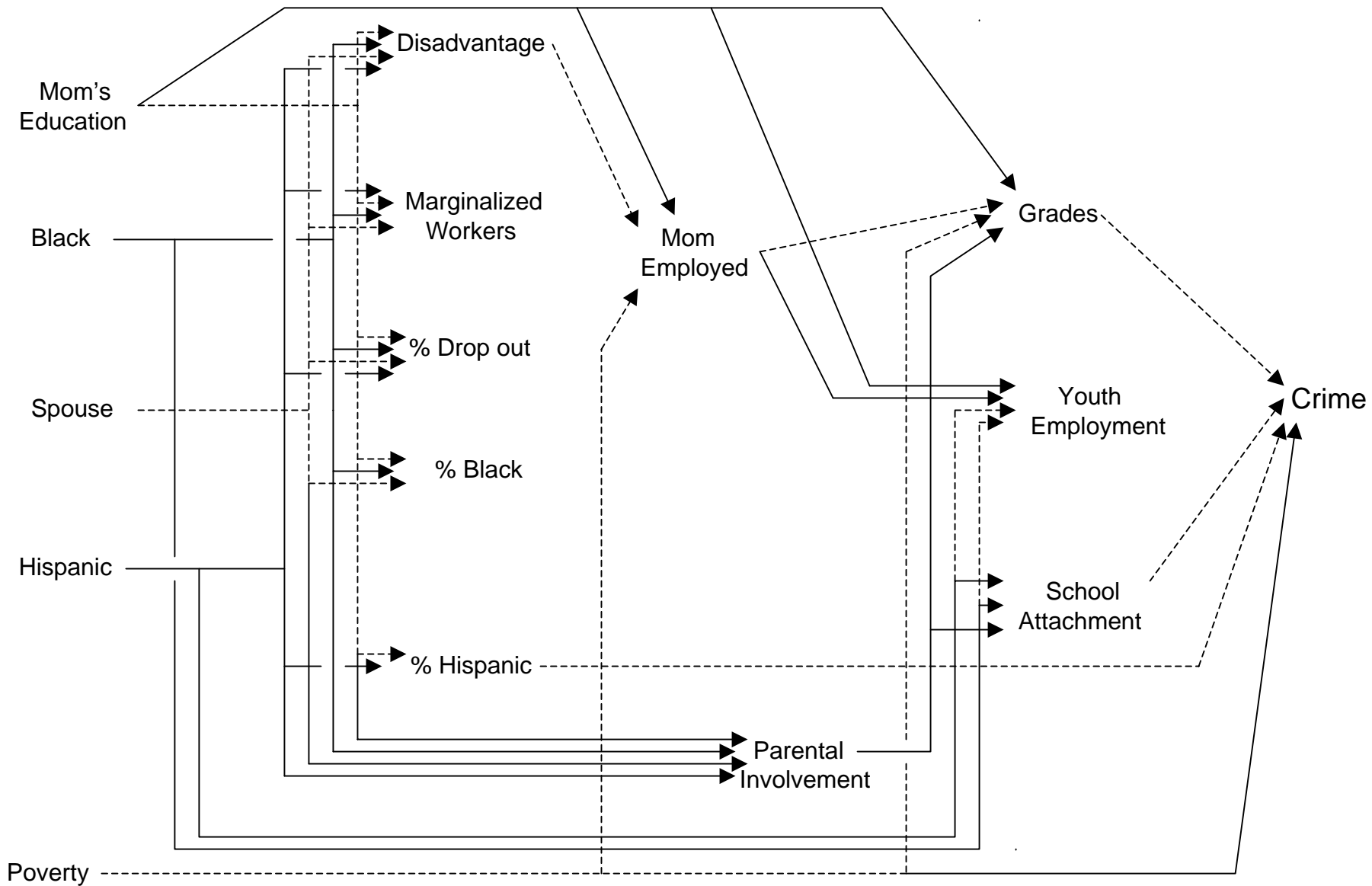
Variable Name	Source Variable from NLSY97	Variable Description
Individual:		**All variables are from sample year 1998 and are either from the mother's main file dataset or the "children of the NLSY – young adults" dataset. All source variables that begin with "R" derive from the mother's main file. Those that begin with "Y" derive from the young adult's datafile.**
Age	Y0974800	Age of Adolescent at Interview Date
Sex	Y0677400	Sex/Gender of Adolescent. Recoded to 0=male, 1=female
Race	Y0677500	Combined Race and Ethnicity of adolescent. Recoded to dummy variables indicating race: Black and Hispanic.
Family Income	R6478700	Total family income from the mother's main file. Mean income was imputed for the cases missing this variable.
Family Poverty	R6478800	Family Poverty Status in 1998. 1=in poverty, 0=not in poverty.
Number of Children	R6198600	Number of biological children the mother has in 1998. Numerical.
Enrollment Status	Y0706900	Enrollment Status of Adolescent. Recoded into dummy terms and used "those not enrolled in school, and highest grade completed is less than 12"=1, otherwise=0.
Dropout Status	Y0708700	Dropout status of Adolescent. Recoded a few missing values to 0. 1=adolescent dropped out at least once, 0=never dropped out.
Repeated a Grade	Y0709300	Repeated a grade. Recoded a few missing values to 0. 1=adolescent has repeated a grade, 0=never repeated a grade.
Grades	Y0715100	Grades received in High School for adolescents. Numerical scale that corresponds to letter grades (1=A, 12=F) in the initial NLSY coding. We reversed coded this variable to make it more consistent with intuitive conceptions of grades (12=A, 1=F). Recoded all missing values to the specific means of group. .
Highest Grade think will complete	Y0720300	Highest Grade Adolescent thinks they will complete. Numerical. Recoded missing values to mean.
School Attachment Scale	Y0707300 Y0707400 Y0707600 Y0707800 Y0707900 Y0708000	A created scale to measure the attachment of the adolescent to his/her school environment. Categorical scale. Recoded all variables so that higher numbers indicate positive school values. Created z-scores for all 6 variables and then summed (conditional on 3 of the 6 variables). Alpha =.673 for scale.
Parental Involvement Scale	Y0712700- Y0714500	A created scale to measure the parental involvement of the parents of the adolescents in the sample. Created z-scores for all 19 variables, and then summed. Alpha =.812 for scale.
Adolescent Employment	Y0748100	Employment of Adolescent. Dummy term 1=adolescent is employed, 0=not employed.
Aggregate:		
Disadvantage		The result of a factor analysis of 5 tract level variables for each

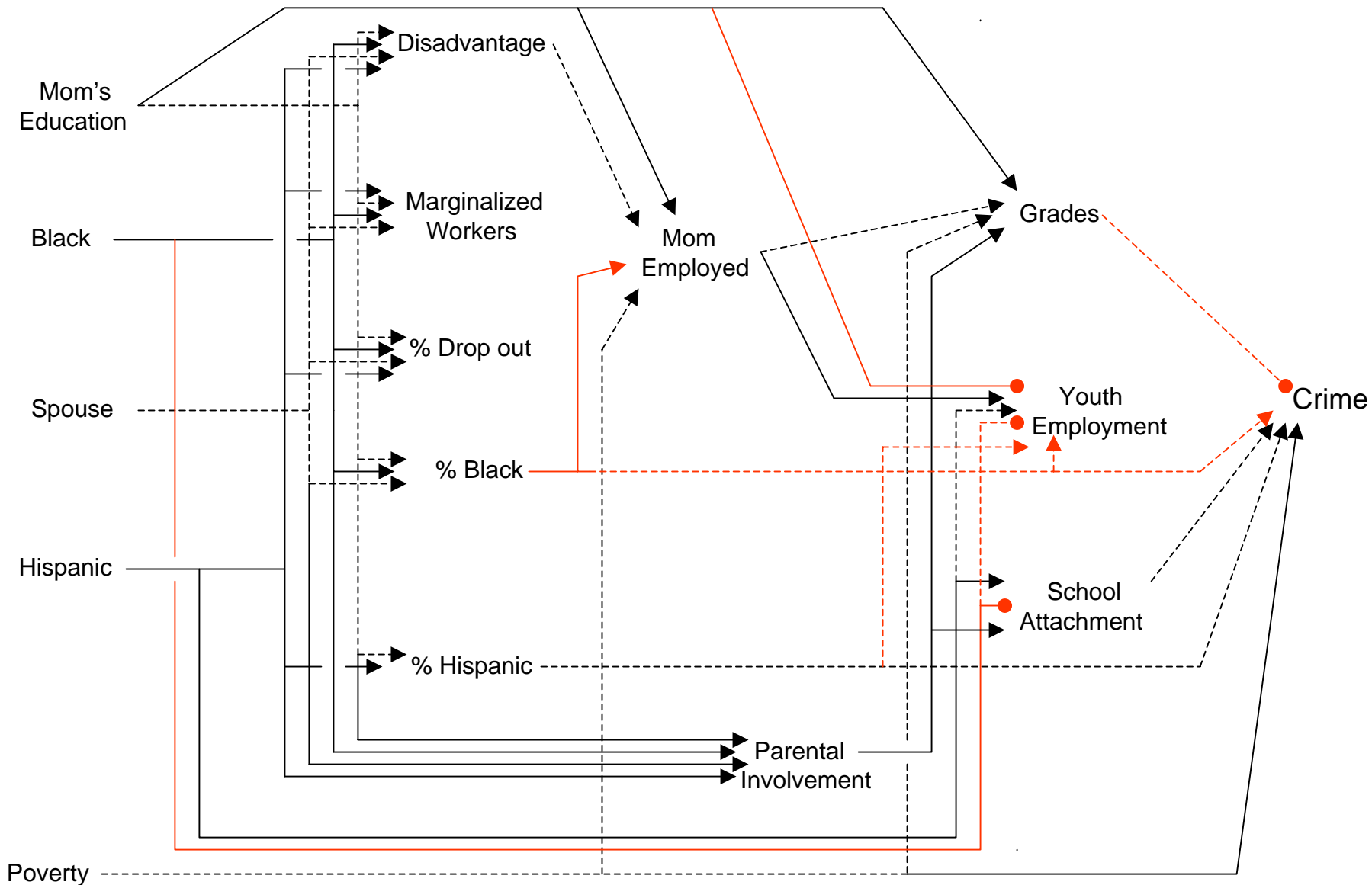|		individual: %extremely poor, percent on public assistance, percent of population over 18 living in poverty, total percent not married, and percent that are in the workforce but unemployed.
Percent Black	Created	Overall percent black living in each tract
Percent Hispanic	Created	Overall percent Hispanic living in each tract

Appendix C: Means and Standard Deviations for All Variables

	NLSY 1997			Mothers & Children of the NLSY		
	Mean	S.D.	N	Mean	S.D.	N
Crime Variables						
Crime Index	.05	.12	2902	---	---	---
Delinquency Index	---	---	---	.48	.69	1497
Background Variables						
Female	.50	.50	2934	.52	.50	1497
Age	18.49	.54	2934	16.09	1.36	1497
Black	.27	.44	2934	.37	.48	1497
Hispanic	.21	.41	2934	.23	.42	1497
Married	.04	.19	2934	---	---	---
Father or Step-Father Present	---	---	---	.66	.47	1497
Parental SES Variables						
Father's Highest Grade	12.40	3.08	2934	---	---	---
Parental Income	$38,725	40017	2934	---	---	---
Family Poverty	---	---	---	.13	.33	1497
Mother's Education	---	---	---	1.17	.79	1497
School Variables						
In High School	.22	.41	2934	---	---	---
Ever Suspended	.38	.49	2934	---	---	---
Attachment to School	---	---	---	.00	.56	1497
Grades	---	---	---	8.16	1.99	1497
Parental Involvement in School	---	---	---	.00	.43	1497
Work Variables						
Employed	.59	.49	2934	---	---	---
Weeks worked in Last Year	27.25	18.56	2934	---	---	---
Secondary Sector	.69	.46	2934	---	---	---
Occupational Status	2.95	.97	2808	---	---	---
Youth Employed	---	---	---	.53	.50	1497
Mother Employed	---	---	---	.71	.46	1497
Neighborhood Variables						
% Black	.18	.28	2933	.22	.30	1494
% Hispanic	.12	.21	2933	.12	.22	1494
Disadvantage	.08	.99	2932	.23	1.07	1494
% Marginal Work Force	---	---	---	.03	1.55	1494
% >25 w/ High School Degree	---	---	---	.14	.10	1493

Mom's Education

Black

Spouse

Hispanic

Poverty

Disadvantage

Marginalized Workers

% Drop out

% Black

% Hispanic

Mom Employed

Parental Involvement

Grades

Youth Employment

School Attachment

Crime

Whole Sample Child-Mom Data
N=1497

Mom's Education

Black

Spouse

Hispanic

Poverty

Disadvantage

Marginalized Workers

% Drop out

% Black

% Hispanic

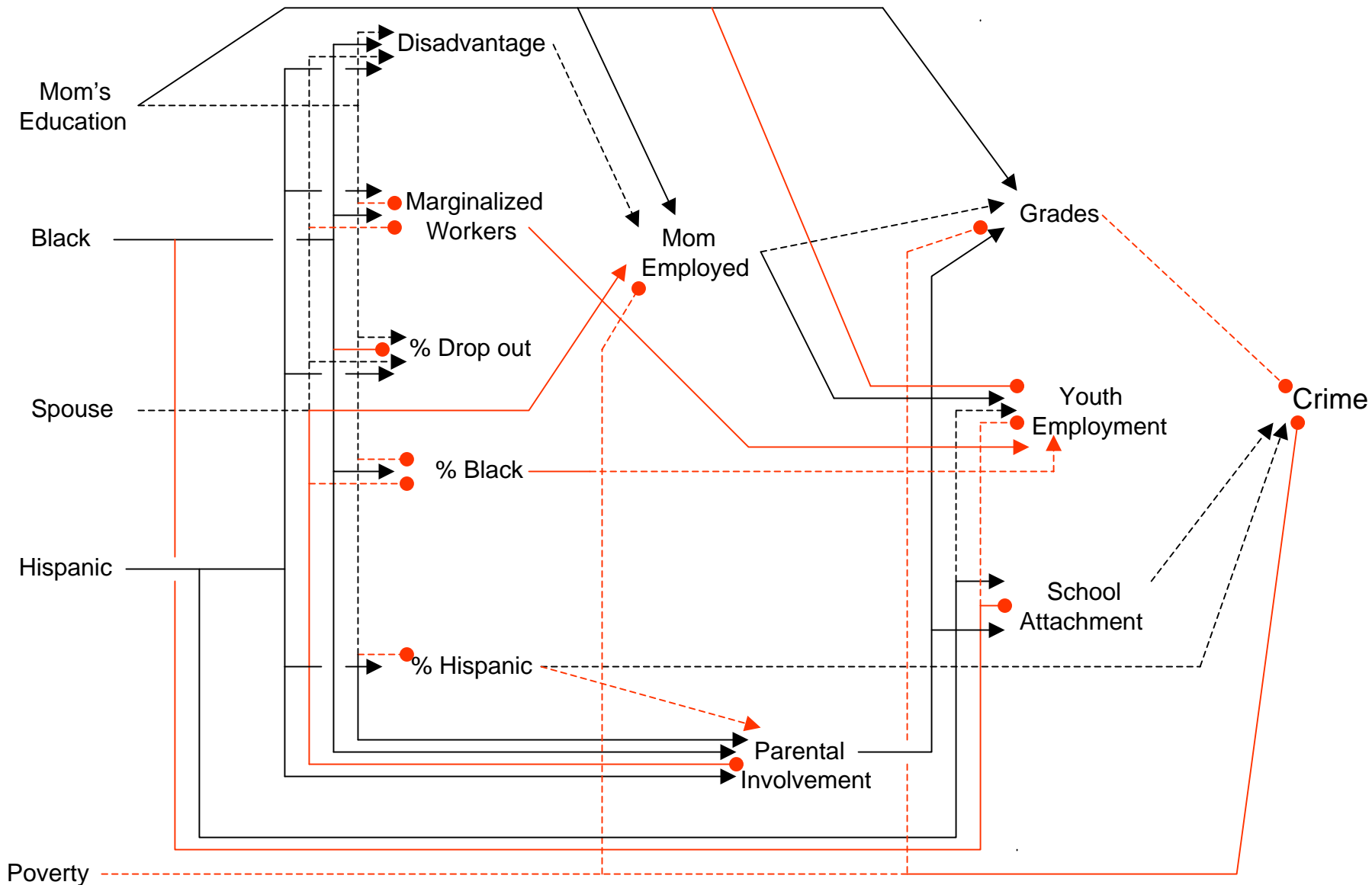Parental Involvement

Mom Employed

Grades

Youth Employment

School Attachment

Crime

KEY:
ONLY SIGNIFICANT (p<.05) RELATIONSHIPS SHOWN.
DASHED LINES INDICATE NEGATIVE EFFECT.

In SMSA Child-Mom Data
N=1167

Mom's Education

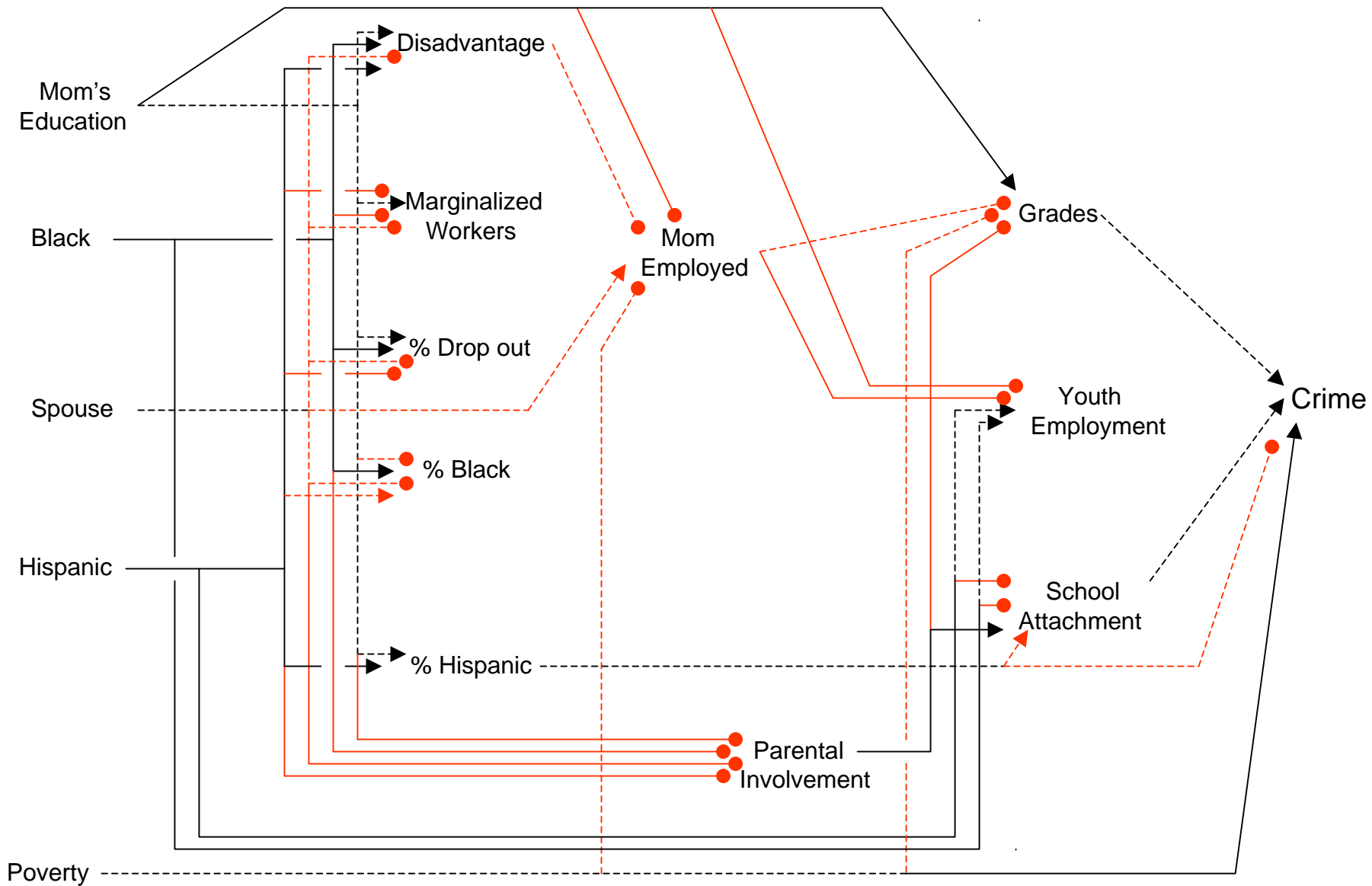Black

Spouse

Hispanic

Poverty

Disadvantage

Marginalized Workers

Mom Employed

% Drop out

Youth Employment

% Black

Grades

Crime

School Attachment

% Hispanic

Parental Involvement

KEY:
ONLY SIGNIFICANT (p<.05) RELATIONSHIPS SHOWN.
DASHED LINES INDICATE NEGATIVE EFFECT.

**Central City Child-Mom Data
N=475**

Mom's Education

Black

Spouse

Hispanic

Poverty

Disadvantage

Marginalized Workers

Mom Employed

% Drop out

% Black

% Hispanic

Grades

Youth Employment

School Attachment

Parental Involvement

Crime

Not in SMSA Child-Mom Data
N=330