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Jeffrey Fagan and Richard B. Freeman

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ABSTRACT

Crime and legal work are not mutually exclusive choices but represent a continuum of legal and illegal income-generating activities. The links between crime and legal work involve trade-offs among crime returns, punishment costs, legal work opportunity costs, and tastes and preferences regarding both types of work. Rising crime rates in the 1980s in the face of rising incarceration rates suggest that the threat of punishment is not the dominant cost of crime. Crime rates are inversely related to expected legal wages, particularly among young males with limited job skills or prospects. Recent ethnographic research shows that involvement in illegal work often is motivated by low wages and harsh conditions in legal work. Many criminal offenders “double up” in both legal work and crime, either concurrently or sequentially. This overlap suggests a fluid and dynamic interaction between legal and illegal work. Market wages and job opportunities interact with social and legal pressures to influence decisions to abandon crime for legal work. Explanations of the patterns of legal and illegal work should be informed by econometric, social structural, and labeling theories. The continuity of legal and illegal work suggests the importance of illegal wages in research and theory on criminal decision making.

Beginning in the 1980s and continuing today, the number of persons incarcerated in the United States increased massively, incapacitating

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many criminals and increasing the risks of punishment for those still active (Cohen and Canela-Cacho 1994; Mauer and Huling 1995; Levitt 1996; Blumstein and Beck 1999). These factors should have greatly reduced the crime rate. Yet through the early 1990s, officially recorded crime failed to decline and self-reports of victimization declined less rapidly than expected as the incarceration rate increased (Freeman 1995; Tonry 1995; Zimring and Hawkins 1995). Although crime rates have recently declined from their peak in the early 1990s, they remain at high levels in the face of increasing costs of crime (Nagin 1998).

An economic explanation would turn first to the labor market determinants of the supply of young men to crime. Young men, usually out-of-school people with limited job skills and employment or earnings prospects, commit a disproportionate number of crimes (Freeman 1996*a*; Short 1997). For crime to persist at high levels during periods of massive increases in incarceration and punishment risk, there must be offsetting increases in the returns to crime, or a highly elastic supply curve of youths to crime because of shifts in the social and economic factors that produce criminality.

Neither the economic nor the criminological literatures offer clarity on this question. Much of the literature before 1980 was based on fairly simplistic concepts of criminality and also about how people divide their time between legal and illegal economic activities. For example, economists emphasized labor market participation and income returns as measures of employment but paid little or no attention to the returns from illegal activities. But the economic lives of unemployed people were sideshows in this literature, and the extent to which their incomes included returns from either crime or licit informal economic activities was poorly understood.

Criminologists also ignored crime as illegal work, or illegal income as a motivation for criminal activity. Instead, they focused on the underlying causes of crime and unemployment and attempted to model the two behaviors, establish their causal order, and determine their relationship to proximate individual-level causes such as family background and peer networks. Accordingly, efforts to explain the relationships between crime and legal work, or the effects of unemployment on criminal involvement, resulted in limited tests of theory and a generally unsatisfactory literature.

These questions have been revisited more closely in the past decade with the growing involvement of young men and women in expanded street-level drug markets, the intensification of poverty and racial seg-

regation, and the economic restructuring of U.S. cities (Massey and Denton 1993; Hagan 1994; Wilson 1996). In the past, analyses of crime and the labor market usually addressed the effects of unemployment or other labor market conditions on crime, and results typically went in the expected direction (Freeman 1983, 1995; Witte and Tauchen 1994; Crutchfield and Pitchford 1997). The growth of illegal income opportunities in the 1980s, in a context of declining wages and job losses in inner cities, increased the potential returns from crime and perhaps altered the basic economic calculus for many young people. Thus labor market conditions and crime opportunities may influence employment in ways not considered before (Fagan 1992*b*; Freeman 1992; Hagedorn 1994*b*).

Until recently, researchers often viewed legal and illegal economic activities as mutually exclusive. One view suggests that through processes of self or social selection, a formidable social and economic wall separates many young men and women from the world of legal work. This separation is the product of several forces that are concentrated in inner-city areas and may account for their persistently higher unemployment rates. Excluded from legal work, their earnings are likely to be heavily skewed toward informal economic activity and also toward crime incomes.¹ For some, juvenile and criminal court records create a cumulative disadvantage that may lead to being labeled as poor risks for hiring, resulting in their exclusion from licit work (Sampson and Laub 1993). Others may be excluded from legal work by poor job skills or low education, a weak labor market, the racial hiring preferences of employers, or spatial mismatches that make jobs inaccessible for urban youths. Also, chronic unemployment and low incomes among adults in poor neighborhoods have shaped social norms that devalue legal work (Sullivan 1989; Anderson 1990). These dynamics leave few income options open other than public assistance, the licit informal economy, or illegal work in crime or drug selling. Still other young men may forgo legal work for what they perceive to be more lucrative careers in crime or drug selling. Others shift back and forth over time, while some juggle legal and illegal economic activities at the same time (Hagedorn 1994*b*; Venkatesh 1997).

At the core of this view is a presumed divide between legal and illegal economic activity that leads many to choose the latter and forgo

¹ Illegal activities are distinguished from the myriad activities of the informal economy, activities that generally involve no criminal law violations. See, e.g., Bourgois (1989); Taylor (1990); Fagan (1992*a*); Freeman (1992).

the former. Economic theory suggests that the person considering crime compares the present value of earnings from crime, net the loss of earnings because of being apprehended and imprisoned, with the present value of earnings from legal work. This person also weighs the riskiness of the crime and then makes a decision. Thus three factors enter the calculus: legal earnings, risks and extents of penalties, and illegal earnings.

Given the alternatives of low-wage payoffs from legal work and the expectation of relatively high returns from income-generating criminal activities, coupled with high incarceration risks that may appear to be independent from crime commission, illegal activity may seem a rational choice not unlike choices made among legitimate occupational pursuits (Becker 1968; Viscusi 1986*b*; Freeman 1991). Whatever the origins of the decision to engage in illegal work, the onset of an illegal career is often viewed as narrowing later economic and social options for engaging in legal work, foretelling a lengthy career of illegal pursuits outside the social world of legal enterprise (Hagan and Palloni 1990; Freeman 1992; Sampson and Laub 1993). Nevertheless, as we illustrate in this essay, these decisions, and the supply of young men to crime, are far more elastic than they appear.

A. Types of Illegal Work

Any discussion of the general link between crime and work requires a careful elaboration of the different types of crimes and their potential relationship to legal work.² Consider the following examples: (1) employee theft and embezzlement, white-collar crime; (2) fencing, selling stolen goods, running a chop shop or other criminal distribution system; (3) tax evasion; (4) drug dealing, prostitution; (5) vehicle theft, burglary, robbery; (6) kidnapping; (7) domestic violence, child abuse, barroom brawling, driving while intoxicated. The first category requires that the criminal hold a licit job, while the second and third ordinarily are committed by people who are legally working and whose work provides access if not motivation for their criminal activities. People in the fourth category often are not working legally, but they may work legally as a cover or to provide an economic backup if their illegal work is disrupted by police activities. These jobs have the characteristics of work: they require a significant time commitment as well as skill and commitment (Letkemann 1973). The fifth type of crime involves small trade-offs of time between legal and illegal work. That

² We are indebted to Phil Cook for helping shape these distinctions and their meaning for this essay.

is, for people in this category, time most likely is not an important issue in deciding whether to participate. However, the returns from crime in categories 5 and 6 may reduce monetary incentives to work legally. The last category requires no competition for time with legal work, and work will be unrelated to these types of crime.

This essay is primarily concerned with offenders in categories 4 and 5. Here, the choice to engage in these crimes involves both monetary returns and time allocation. Although these considerations may not be totally independent, neither are they closely linked. For example, drug dealing more closely fits Isaac Ehrlich's (1973) time allocation model of participation in illegitimate activities. The individual divides his or her time according to the anticipated monetary returns and the risks of punishment. The fifth category, however, may not involve any decisions regarding time allocation and reflects the model of rationality described by Gary Becker (1968): these activities are more like gambles (where the concerns are risks and payoffs) rather than time allocation dilemmas. Time may still be an indirect factor in the form of time-consuming prison terms or wage-reducing social stigma (Cook 1980).

These varying relationships between crime and work suggest different types of links, based on the two streams of criminal choice: time allocation and risk preference. The latter ignores time allocation (Becker 1968) and is the stronger of the two streams of thought in this literature. We follow that logic in this essay, and we analyze the evidence in a framework that integrates punishment risk and cost, comparative monetary returns, and the social returns and costs of criminal involvement. We also use the term "unemployment" to refer to the condition in which an individual is not working, or jobless, regardless of whether the person is actively seeking legal work. Whether in the formal labor force or not, we assume that individuals are always seeking streams of income. It is the choice of the licit or illicit stream that we examine here.

B. Continuity between Legal and Illegal Work

Both empirical research and theory challenge a deterministic view of an exclusive relationship between crime and legal work. Rather than dichotomous choice, economic activity for some people seems to vary over a continuum of legal and illegal "work." This is especially true in U.S. inner cities, where a split or "dual" labor market has distanced adolescents and young adults from work that offers the potential for wage growth, skill acquisition, and job stability (see, e.g., Crutchfield [1989, 1995], and Crutchfield and Pitchford [1997], on labor stratifi-

cation, legal work, and crime). In the absence of such opportunities, the connection between legal and illegal markets is closer than in more advantaged communities with broader labor markets. Several studies show a fluid, dynamic, and complex interaction between legal and illegal work. Legal and illegal work often overlap both within time periods and over developmental stages. Among young drug sellers, more than one in four is also employed in legal work (Reuter, MacCoun, and Murphy 1990), and legal wages do not necessarily decline as illegal wages increase (Fagan 1992*a*, 1994).³ Many drug sellers are only sporadically involved in drug sales, ducking in and out of conventional labor markets at regular intervals (Hagedorn 1994*a*, 1994*b*).

Ethnographic studies (Sullivan 1989; Williams 1989; Taylor 1990; Padilla 1992; Adler 1993) suggest a blurring of distinctions between legal and illegal work, and a broader conceptualization of work that neutralizes the legal distinctions among licit and illicit income-generating activities. Individuals involved in illegal work may change their evaluations over time of the costs and returns of such work compared to legal pursuits, leading to career “shifts” from illegal to legal sources of income (Shover 1985, 1995; Biernacki 1986; Tunnell 1992; Decker and Wright 1995; Wright and Decker 1997).

Recent theoretical developments also challenge deterministic conceptions of illegal work. In part, economists and criminologists have viewed crime and work as exclusive choices because most study designs are single-period individual choice models that ignore within-individual changes over time (Good, Pirog-Good, and Sickles 1986; Witte and Tauchen 1994). Beginning with Becker (1968) and Ehrlich (1973), crime and legal work have been viewed by economists as the result of rational choices among options that carry both costs and returns. In their simplest form, crime and work are substitutes: each takes time and each produces income. Making decisions to engage in one or both behaviors is a process akin to an optimization model that reflects the distribution of opportunities and the costs and returns of alternative pursuits (Clarke and Cornish 1985; Stephens and Krebs 1986; Grogger 1994). Nothing in this framework argues against a vector of income-generating activities that involves simultaneous activities across legal

³ The “doubling up” of legal work and cocaine sales in the Fagan (1992*a*, 1994) and Reuter, MacCoun, and Murphy (1990) studies indicates that, for many young men, illegal work may be temporary or transitional work that supplements difficult low-wage or otherwise unsatisfactory work. For others, legal work provides options to riskier illegal work or perhaps broadens markets for sellers of illegal goods or services.

boundaries, constrained by time and the distribution of opportunities, and varying over time.

Life-course models present another challenge. In this view, individuals move in and out of activities (roles) that reflect specific developmental stages and the social and economic contingencies attached to each stage (Sampson and Laub 1993). Behavioral trajectories of crime or legal work change as individuals progress through predictable life stages that expose them to changing contingencies and opportunities. These perspectives stand in stark contrast to theories of deviance that attempt to explain involvement in illegal behavior as the product of criminal "traits" that are stable and enduring over the life course (see, e.g., Gottfredson and Hirschi 1990). Instead, the active and fluid movement of individuals in and out of illegal work suggests active management of their income-producing activities and a great deal of human perception and agency in their choices.

In this essay, we view crime and legal work as a continuum of income-generating behaviors over the life course. This leads to several conclusions that challenge conventional views. First, the tradeoff in wages between legal and illegal work suggests that decisions to earn money through crimes or drug selling are rational ones. For younger people leaving school, their entry into legal and illegal work is influenced by processes of adolescent development in the complex developmental stage of school-to-work transitions. These transitions are further complicated in inner cities with narrow and highly segmented labor markets, recent unskilled labor surpluses, and expanded illegal markets. This is especially salient for adolescents entering the workforce with limited employment and earnings prospects. For workers already in the work force, decisions to enter illegal work reflect their experiences in the legal work force, both economic and social, and a rational economic assessment of the risks and returns from illegal work.

Second, despite rising incarceration rates, the threat of punishment does not seem to be a meaningful cost of crime. In earlier historical periods, the threat of incarceration would discount the monetary returns from crime. But low wages for unskilled workers reduce the legal opportunity costs of punishment. And, in periods of high incarceration, punishment appears to no longer be a low probability event but a near certainty from involvement in crime. This reduces the salience of social stigma associated with punishment, and the contingent value of punishment costs. In addition, a criminal conviction record has an adverse effect on future employment and earnings. The disadvantage

of early criminal justice participation compounds over time, making entry to legal work often difficult and limited to low-wage, low-skill jobs.

Third, the relationship between illegal and legal work appears to be fluid and dynamic rather than deterministic. Many legal workers are involved concurrently in illegal economic activity. This “doubling up” suggests an active management of income-producing activity that capitalizes on opportunities in illegal markets while maintaining the social, legal, and economic benefits of legal work. Others move back and forth between legal and illegal work, carefully managing the benefits and risks of each economic sector and activity. These decisions are based in part on wages and in part on punishment risk, and they also reflect developmental stages in which crime and legal work have changing social value.

Fourth, although crime wages seem to be a strong factor influencing the choice of illegal over legal work, “market” wages in legal work compete well with illegal wages and can tip work choices toward legal activities. The choice of illegal work seems to be contingent on the alternative of low legal wages tied to unskilled or entry-level jobs. However, the young males who are most prone to crime will choose legal work over illegal work when legal wages approach a rate or “market” value for skilled labor, wages that are comparable with skilled labor. A corollary lesson is that tight labor markets may drive up wages and create wage incentives that compete with illegal markets.

Fifth, the decision to abandon crime is influenced by legal work opportunities. Desistance is a natural process for many offenders, hastened by a combination of intrapsychic, social, and legal pressures. Work is a central part of the process of desistance (Sampson and Laub 1993). To the extent that these exits from crime are accessible, desistance from crime can begin earlier in the life course and can proceed with fewer setbacks and stumbles. Finally, the increasing but poorly understood participation of women in illegal work raises additional issues about gender and the dual nature of work.⁴ We explore these themes in depth in the sections that follow.

⁴ Like their male counterparts, many women drug sellers “double up” in drug selling while working legally (Fagan 1994). Some have had long careers of petty hustles and paper frauds or prostitution work. But many others have not been involved in illegal work until the expansion of the drug economy created new opportunities. Their pathways into illegal work are little understood and likely reflect gender issues in both the licit and illicit economies.

The interaction of legal and illegal work raises several questions that are the focus of this essay. We begin Section I with a review of quantitative studies of crime, unemployment, and legal work. This review compares macro-structural with individual studies and finds some conflicting evidence between them. We turn then to analyses of longitudinal data to illustrate the effects of criminal justice involvement on future employment and earnings. Next we examine the effects of both legal and illegal wages on work choices. Estimates of illegal wages are reviewed, including a close examination of income from drug dealing. We then examine empirical studies that estimate models of econometric choices of legal and illegal work. We review several studies that integrate deterrence and econometric perspectives by including punishment costs with perceptions of monetary gains in both legal and illegal sectors.

In this section, we address issues related to both theory and policy. First, does illegal work draw workers away from legal work? Few studies have examined the extent to which illegal work (especially in drug selling) draws young workers from the legal economy or whether people doing illegal work are nonparticipants in legal work. To what extent do human capital issues, as well as work opportunities, mediate work-crime relationships? How do regional variables, including the spatial distribution of legal employment and the redistributive functions of illegal markets, influence crime-work relationships?

This first section concludes with an analysis of the extent to which individuals “double up” by combining legal and illegal work in an overall strategy of income production. If workers are active decision makers, how often do they “double up” in the legal and illegal economies? To what extent are work and crime mutually exclusive in short periods or across years?

Section II reviews qualitative evidence on the social meaning of legal and illegal work and on decision making with respect to choices for generating income. In this section, we construct a social framework for explaining decisions to shift between legal and illegal work. Recent ethnographic research suggests several factors that influence shifts by workers from legal to illegal work and back again. For those who have abandoned the formal labor force for illegal work, what experiences shaped and influenced their decisions? How have those transitions occurred? How do nonworkers view work in an era of declining legal work opportunities? For some, the transition from legal to illegal work may be temporary, raising questions about their experiences in illegal

work and the factors that influence their return to legal work. How and why do they decide to return to legal work? Still others may shift back and forth over time. This raises a corollary question about how “dual” careers are managed and the factors that trigger shifts into or out of illegal work.

Section III examines empirical evidence on the abandonment of crime for legal work. We rely primarily but not exclusively on qualitative studies of decision making by active offenders. Implications from both life course and econometric research are discussed. Section IV concludes the essay. First, we identify the methodological issues in studying income-producing careers and the prospects for using incomes as a dependent variable. Then we apply perspectives from contemporary criminological theories to interpret the empirical evidence on the crime-work relationship and conclude by offering an agenda for both basic and policy research on crime and work.

I. Crime, Work, and Unemployment

Two often disparate literatures inform our understanding of crime and unemployment. Economists view work, whether legal or not, as a rational decision on how to allocate one's time for income production. It suggests that economic costs and incentives have explicit effects on decisions to engage in legal or illegal work. Becker (1968) proposed a risk preference model in which consumers choose legal work or crime as a function of risk, legal wages, and criminal returns. Several variables are thought to influence this relationship. First, the expected returns from crime and the expected income from legal work establish the economic prospects of competing alternatives. Second, the returns from illegal work are discounted by the potential costs of criminal sanctions from illegal work. Third, labor market variables influence the perception of the likelihood of legal income, where loose job markets (and high unemployment) drive down wages from legal work. Fourth, the discount from criminal sanctions depends on whether prison is a price worth avoiding. When crime incomes are potentially high, the costs of incarceration may be relatively low compared to forgone illegal wages.⁵

⁵ Predictions in this framework depend critically on attitudes toward risk and on moral views. Higher criminal incomes relative to legal incomes are needed to induce people to commit crimes when they are risk averse or are morally principled. We return to this question later in discussing the nonmonetary returns from “lifestyle” and taste variables.

Criminologists tend to divide in their views of crime and work in several ways. While many agree that crime and unemployment are negatively associated, there is strong disagreement on both causal order and the underlying causal mechanisms. Several studies attribute crime to unemployment (e.g., Good, Pirog-Good, and Sickles 1986), while some economists suggest that crime causes unemployment (e.g., Freeman 1992). Some view the negative association between crime and unemployment as spuriously attributable to a common underlying personality trait, such as lapses in self-control (Gottfredson and Hirschi 1990).

Some view the choice of crime as a reflection of strain resulting from the gap between expectations and opportunities for legal work (Agnew and White 1992). This perspective is part of an older tradition in which unemployment and joblessness are markers of the degree of deprivation or social inequality afflicting persons or groups (see, for a review, Short [1997]). Other perspectives suggest that crime and work are reciprocally related. Early involvement in crime may attenuate occupational attainment, in turn increasing the likelihood of subsequent crime, a sequence that repeats several times over developmental stages (Thornberry and Christenson 1984).

Still others claim that the association is conditional: avoidance of crime is contingent on some quality of employment beyond simple entry into any occupational status. This perspective reflects the traditions of economists who are concerned about the characteristics of work or joblessness that promote or limit involvement in crime. These models effectively translate structural concepts about crime causation into models centered on individual change over the life course. For example, Sampson and Laub (1993, p. 304) claim that "employment by itself" does not increase social control but that work leads to internalized social controls through commitment and stability. Legal work also exposes workers to the social controls of the workplace. Uggen (1996) argues that exposure to high-quality jobs reduces criminal activity and that stratification in job opportunities affects decisions to pursue criminal activity (see also Rosenfeld and Messner 1989).⁶

However, stratification of illegitimate work may also influence the work-crime relationship. Higher positions in illegitimate occupations may constrain mobility toward legal work, as well as reducing its ap-

⁶ Occupations themselves represent a stratification of opportunities, a manifestation of Merton's concept of "legitimate means" (1938).

peal (Matsueda et al. 1992). Thus, for both economists and criminologists, the comparative advantage of legal versus illegal work involves both status returns and economic returns. How the two are weighed in decisions about income has rarely been studied.

Conceptual approaches to the crime-work relationship also have differed in how work is operationalized and measured. Measures of labor market attachments have included work participation (job participation, time spent in work, job stability), occupational status, and returns from work. Despite the importance of the net returns of legal versus illegal activities, illegal wages have rarely been studied, nor has status in deviant networks been studied closely (see, for an exception, Matsueda et al. 1992). Also, because crime and legal work are often viewed as trade-offs or time substitutes, little consideration has been given to the simultaneity of crime and work. Accordingly, to analyze trends in the empirical literature, we conceptualize crime and legal work from three perspectives: crime and the legal labor market; crime, legal work, and illegal wages; and the joint distribution of crime and legal work.

A. Crime and Unemployment

While studies at the aggregate level show some connection between labor market variables and crime, they “fail to show a well-defined, quantifiable linkage” (Freeman 1983, p. 106; see also Freeman 1995). These studies take several forms: comparison of crime rates with labor market variables (such as unemployment or wages) over time, cross-area studies that compare crime and economic characteristics across states or countries, and individual studies that compare crime and work variables across people, sometimes over time. For example, time-series data allow us to examine the effects of the business cycle on crime and to estimate what might happen to crime if overall job prospects or wages improved or worsened.⁷ Freeman (1983) reviewed ten time-series studies and found crime-labor market linkages in nine. That is, changes in labor market characteristics—employment and unemployment rates, wages for various groups in the workforce, the distribution of jobs by skill level—influenced changes in the crime rate. Improving work prospects were associated with declining crime rates.

However, in the three studies that also included deterrence vari-

⁷ Time-series data suffer from a number of problems that make social scientists leery of their results. For example, variables tend to move together over time, providing little independent variation from which to infer relations. Also, the unexplained part of the dependent variable is correlated from one year to the next.

ables, the net effects of labor market variables were weaker than the legal sanction variables. These studies showed a positive association between the certainty of arrest and crime rates. When labor market variables were added to these models, the effects of the legal sanction variables were greater than the effects of the labor market characteristics. Freeman (1983) also reviewed fifteen cross-sectional studies and again found weak links using income variables but more positive effects when deterrence variables were included. However, the deterrence studies focused more intensively on legal sanctions and the expected costs of crime and rarely analyzed the anticipated net returns from crime. This imbalance in models may have produced (artificially) stronger deterrence effects compared to market incentives (Viscusi 1986*b*).

Analyses with data from the 1980s suggest a clearer positive association between crime and unemployment at the aggregate level. One reason for this may be the declining economic (wage) position of unskilled men (and increasingly, women) throughout the 1980s (Blackburn, Bloom, and Freeman 1990; Moss and Tilly 1991; Corcoran and Parrott 1992). These recent macro-level studies tend to locate unemployment as a cause of crime in a specific causal sequence. Reviewing sixty-three studies, Chiricos (1987) reported a positive relationship between unemployment and property crime. Using time-series models in which unemployment is lagged and therefore presumably antecedent in the causal sequence leading to crime, both Cantor and Land (1985) in the United States and Reilly and Witt (1996) in the United Kingdom reported a positive effect of unemployment on crime. Land, McCall, and Cohen (1990) extended this finding by showing that this relationship is stronger at the intracity level compared to intercity or national comparisons. The Land et al. (1990) study also reduced the persistent and extreme collinearity in aggregate measures of crime and unemployment.

Individual-level studies suggest that relationships between crime and unemployment differ when viewed concurrently at specific times or in sequence over time. Both the contemporaneous and longitudinal behaviors also may be spuriously related to disadvantages in social and developmental contexts. In several studies, adult crime and unemployment are linked (in a nonspurious relationship) from parental behavior problems through childhood behavior problems to diminished adult employment prospects and involvement in crime (see, e.g., Hagan 1993*a*). Unlike the macro-level studies, in which changes in aggregate

unemployment rates precede increases in crime rates, these individual level studies posit a causal sequence in which crime precedes unemployment in a sequence of developmental stages. However, when the time units are smaller, it is unclear whether crime or unemployment is the dominant social role and what are the (nonspurious) proximal causes of each behavior. These studies generally lack information on the closely timed sequences of unemployment and crime. Also, as with most literatures, there are potentially confounding artifacts of measurement and study design that must be sorted out.

Research in the United States suggests that there are both contemporaneous and reciprocal effects between unemployment and crime. Good, Pirog-Good, and Sickles (1986) observed employment and arrest records monthly for 300 youths aged thirteen to eighteen in a crime prevention program in inner-city Philadelphia. They reported a contemporaneous relationship between crime and employment in the expected (negative) direction, where "employability" had a substantial deterrent effect on crime. But the contemporaneous effects of crime on employment were weaker. Put another way, prior criminal record reduced employability, leading in turn to higher rates of crime.

Using four-wave panel data and a 1945 Philadelphia birth cohort, Thornberry and Christenson (1984) obtained much the same result. Unemployment had significant instantaneous effects on crime, and crime had significant and primarily lagged effects on unemployment. They also found that social class mediated these effects both longitudinally and cross-sectionally: the relationships were strongest for African American youths and youths from blue-collar backgrounds. Witte and Tauchen (1994) also used this birth cohort to estimate the effects of wages and employment on crime using deterrence variables that are dependent on the individual's level of criminal activity and neighborhood.⁸ Employment (but not wages), school attendance (but not educational attainment), and increased arrest probabilities exert significant negative effects on crime.

Sampson and Laub (1993) reanalyzed data from Glueck and Glueck's *Unraveling Juvenile Delinquency* (1950), a longitudinal study of 500 delinquents and 500 carefully matched controls, and later follow-ups (1968). The delinquent sample was constructed in 1939 and

⁸ According to Witte and Tauchen (1994), individuals face a deterrence "schedule" or function that relates levels of criminal activity to a probability of arrest. They assume that there are exogenous shifts in the schedule because of differences in police policies or budgets, or changes in the legal code. They also assume that crime and work are not independent and frequently overlap (i.e., they are not substitute uses of time).

consisted of white males ages ten to seventeen from several Boston neighborhoods and who had been committed to one of two state juvenile correctional institutions. The controls were recruited from the Boston public schools. Sampson and Laub (1993) found consistent (negative) effects of job stability during early adult years (seventeen to twenty-five) on annual adult arrest rates for several crime types, after controlling for juvenile crime rates. Like several other studies, Sampson and Laub claim that "job stability is central in explaining adult desistance from crime" (1993, p. 162). Juvenile incarceration time not only had no significant effect on crime rates as an adult, but its stigmatizing effects may "mortgage" (p. 165) opportunities for and prospects for stable employment in adult life (p. 168). During middle adult years, job stability during ages twenty-five to thirty-two had a significant negative effect on crime participation during later (thirty-two to forty-five) adult years, and no other variable had a larger coefficient.

The effects of employment stigmatization from arrest differ for young persons in the "spot" versus career labor markets. Bushway (1996) analyzed National Youth Survey data, a longitudinal study with a representative sample of 1,725 adolescents who were eleven to seventeen years of age in 1976 (Elliott, Huizinga, and Menard 1989). Eight subsequent waves provided detailed histories of work and both self-reported and official crime. Within three years of an arrest, respondents who were arrested worked seven weeks less and earned \$92 per week less than would otherwise be expected without an arrest (Bushway 1996, p. 35). Arrest, regardless how minor the offense, had adverse impacts on job stability and earnings, after controlling for individual differences in criminality, even while criminality by itself had no effect on earnings (Bushway 1996, p. 59). But there also is an interaction with age producing a paradoxical effect: persons below twenty-two years of age earn more if arrested. These results are consistent with other analyses based on data with samples of British youths (Nagin and Waldfoegel 1995). Evidently, the short-term effects of arrest redirect youths from long-term or career tracks to spot or secondary labor markets where earnings are higher in the short run but have limited wage growth over subsequent life stages. One important limitation of this analysis is the exclusion of African Americans from the sample, citing concerns by Weis (1986) "about the consistency of self-reported arrest data for African Americans" (Bushway 1996, p. 72).

For this essay, we reanalyzed the National Longitudinal Survey of Youth (NLSY) to assess the effects of crime and legal work in late adolescence on later work experience and incarceration. The NLSY is a

panel study of ($n = 5,332$) randomly selected youths beginning in 1979, with oversamples of minority and poor youths. Comparisons by Bushway (1996) of the NLSY and NYS samples showed nearly identical annual earnings from legal work in 1980 (\$7,300) and work participation (1,480 hours) during the survey year. Unlike the NYS, the NLSY affords estimates of illegal income. We found the predicted positive association between crime and unemployment in the 1980 waves. Work and incarceration outcomes in 1983, 1986, and 1989 were then estimated from the cumulative effects of incarceration, crime, and work in the preceding intervals. Controls for demographic and human capital variables at 1979 were included in each model. Crime measures were available only for the 1979 wave, and the proportion of income from illegal sources was computed. In each wave, incarceration was a dichotomous measure based on whether the interview took place in a jail (or prison). Human capital variables included school participation, grade, weeks worked, and test scores from the Armed Forces Qualifications Test (AFQT) (O'Neill 1990).

Table 1 shows that the effects of involvement in crime, detachment from legal work, and human capital in 1979 on future incarceration were stable and consistent over the successive waves. The percentage of income from illegal sources significantly contributes to the probability of incarceration in later years. The higher the pay from crime (relative to legal sources) in 1980, the greater the likelihood of being incarcerated in later years. Analyzing data only for those respondents with any illegal income in 1980, Freeman (1994, fig. 4) obtained much the same result. The increase in the coefficient for illegal income in both these analyses suggests an elasticity of relative rewards from crime, a function of the decline of legitimate wages for youths over this period (see also Grogger 1994, 1998).

Next, we estimated models for two employment outcomes in each of the three time periods: weeks worked during the year and legal income.⁹ The effects of incarceration were estimated using measures of the number of years of incarceration from 1980 to 1982. Adolescent involvement in crime and illegal wages in 1980 also were included. Table 2 shows the t -values for each parameter for each outcome by period. Over the three waves, incarceration produced a significant negative effect on each work outcome, even after adjusting for the

⁹ We also estimated a model for occupational status. The results were nearly identical with those of the wage model and are not shown. Results are available from the authors.

TABLE I
 Linear Probability Estimates of Effects of Illegal Income in 1979 on Later Incarceration (Unstandardized Coefficient, *t*)

	Jail in 1980			Jail in 1983			Jail in 1986			Jail in 1989		
	<i>b</i>	<i>t</i>		<i>b</i>	<i>t</i>		<i>b</i>	<i>t</i>		<i>b</i>	<i>t</i>	
% income from crime 1979	.154	4.96***		.046	2.63**		.074	3.86***		.087	4.27***	
Total crimes 1979	.001	7.53***		.0002	3.61***		.0002	3.91***		.001	8.31***	
Weeks worked 1979	-.0004	-2.26*		-.0001	-1.54		-.0003	-2.80**		-.0002	-2.05*	
Age 1979	-.002	-1.21		-.002	-1.36		-.002	1.05		.001	.87	
Grade 1979	-.006	-3.47***		-.001	-0.67		.001	1.11		-.001	-.54	
AFQT	-.001	-5.16***		-.0002	-2.31*		-.0004	-3.35***		-.0003	-2.73***	
Race (nonwhite)	.067	7.52***		-.028	5.64***		.012	2.18*		.025	4.18***	
In school 1980 ^a				-.013	-2.49*		-.020	-3.34***		-.012	-1.86	
Constant	.190	4.73***		.065	2.71**		.052	1.95		.014	.49	
<i>N</i>	4,124		4,031			3,336			3,302			
<i>F</i>	63.22		18.55			17.46			31.19			
<i>p(F)</i>	.000		.000			.000			.07			
Adjusted <i>R</i> ²	.096		.034			.038			.068			

^a Excluded from the 1980 model: respondents were in either school or jail in 1980.

* *p* < .05.

** *p* < .01.

*** *p* < .001.

TABLE 2
 OLS Regression of Effects of Incarceration in 1980-82 on Work Outcomes (*t*-Values)

	1983		1986		1989	
	Legal Income	Weeks Worked	Legal Income	Weeks Worked	Legal Income	Weeks Worked
Years in jail (1980-82)	-4.60***	-7.16***	-4.62***	-8.99***	-2.43***	-12.99***
% income from crime 1979	-.15	-0.08	-.45	-.34	1.66	-.87
Total crimes 1980	.08	-.06	-.69	-.80	.08	-1.25
Weeks worked 1980	19.12***	23.27***	10.87***	12.28***	3.55***	10.47***
Age 1979	11.33***	6.45***	8.98***	4.77***	3.36***	.33
Grade 1979	-3.74***	-4.19***	-.45	-.83	2.75***	.81
AFQT 1980	5.42***	2.43*	8.30***	.96	4.50***	1.80
Race (nonwhite)	-5.24***	-6.58***	-4.04***	-5.89***	-2.28*	-4.20***
Constant	-6.39***	2.07*	-5.47***	-5.38***	-3.61***	10.79***
<i>N</i>	4,031		3,336		3,302	
<i>F</i>	93.35		50.62		54.85	
<i>p</i> (<i>F</i>)	.000		.000		.000	
Adjusted <i>R</i> ²	.171		.118		.128	

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

simultaneous effects of race, human capital, and intelligence. Moreover, early incarceration negatively affected later work outcomes independent of the effects of the level of crime activity in 1980. Work is a stable behavior over a ten-year period, with weeks worked in 1980 predicting weeks worked in 1989. Labor force participation and AFQT scores in 1980 were positively associated with work outcomes in the later waves. However, school participation in 1980 was not a consistent predictor of work outcomes in any subsequent period.

These trends suggest that the adverse consequences of incarceration and exclusion from work during adolescence, compounded by human capital advantages or deficits, endured over a ten-year period through middle adult years for both incarceration and employment. Others report similar results. For example, Grogger (1995) also used NLSY data to show that arrests early in adulthood reduced future legal wages in the short term net of either "criminal capital" or human capital variables. However, any disadvantage from arrests in future legal earnings was overtaken by other human capital deficits over a ten-year interval.

Studies with ex-offenders also show the significant effects of unemployment on crime. For example, the TARP (Transitional Aid Research Project) was a randomized experiment that tested the effects of income supports for ex-offenders from Texas and Georgia released from prison in 1976–77 (Berk, Rossi, and Lenihan 1980; Rossi, Berk, and Lenihan 1980). There were no significant effects of income supports on short- or long-term returns to prison in either the Texas (Needels 1993) or Georgia (Needels 1994) samples. However, analyses of the pooled experimental and control samples show that both employment and (legal) earnings have strong significant effects on subsequent crimes following release from prison, even when those wages are sporadic and well below the poverty level. For example, among the Georgia releasees, legal earnings over a ten-year follow-up period have a large and significant effect on criminal desistance but not on the timing (hazard) of return to prison among those who are reincarcerated (Needels 1994). Perhaps most important is the negative effect of crime on earnings: individuals who were not criminally active over the follow-up period earned about 40 percent more than their criminally active counterparts (34 percent). These effects are likely to be conservative estimates, since this population has relatively low human capital, their employment is sporadic and not well paying, and their crime rates were quite high both before and after incarceration.¹⁰

¹⁰ Witte (1980) obtained similar findings with a cohort of North Carolina prison releasees, even with limited information on employment activities and no data on educa-

European studies complement research in the United States. For example, Albrecht (1984) used aggregate data from (the former West) Germany to show that the offender rate within the unemployed youth population actually declined from 1977–82 while overall unemployment was rising dramatically. Albrecht further disaggregated the phenomenon between short- and long-term unemployed and between short- and long-term juvenile delinquents. While crime rates among the long-term unemployed were unchanged, the crime rates among the short-term unemployed actually fell during this period. Albrecht's findings show the importance of the length of unemployment and the effects of longer-term unemployment on crime motivation and propensity. It may be that as unemployment lengthens, expectations of a return to work diminish, and a decay of prosocial norms ensues without the reinforcing interactions of the workplace.

Farrington et al. (1986) used interview data from the Cambridge Study of Delinquent Development, a longitudinal study of 411 adolescent males, to show that crime rates were higher when subjects were unemployed. However, this relationship was conditional on a number of factors. Crime was more likely only among unemployed youths who held attitudes more favorable to offending; those who generally were law-abiding did not commit crimes during periods of unemployment. The crime-unemployment relationship was stronger among youths with histories of low status jobs. Moreover, only income-generating crimes were more likely during periods of unemployment, but violent crime rates did not change.

Using the concepts of embeddedness and social capital in analyses of the Cambridge data, Hagan (1993*a*) argues that adult unemployment and criminality are developmental outcomes of adolescent embeddedness among delinquent peers and parental criminality. Hagan states that “parental criminal conviction interacts with early adolescent conviction to produce later adolescent delinquency and adult unemployment above and apart from other factors” (Hagan 1993*a*, pp. 486–87). Accordingly, youths who are socially embedded during early childhood in social contexts of peer and parent criminality are likely to be isolated in their adult years from legitimate employment opportunities. Like Sampson and Laub (1993), Hagan's analysis is “deracialized” (Lemann 1991) and shows that the processes of social embeddedness

tion. Using length of time for releasees to find a job and the wage of the first job, Witte found that employment and earnings suppressed crime rates.

are generic and occur even in the absence of the aggravating effects of concentrated poverty in the contemporary U.S. context.

In a sample of young males from the Netherlands, Huurne (1988) showed that human capital variables further mediated the effects of unemployment: having a high school degree or coming from a higher social class background mitigated the social consequences of unemployment. Ploeg (1991) obtained similar findings among 300 long-term unemployed Dutch men twenty to fifty years of age. Unemployed men who avoided crime prior to unemployment were unlikely to engage in law violations, but former delinquents continued their crimes. Like the Farrington et al. (1986) study, Ploeg concluded that unemployment is iatrogenic with respect to crime by engendering feelings of deprivation and injustice that precede crime.

B. Crime, Work, and Illegal Wages: Market Incentives for Crime

An econometric, rational choice perspective on crime and work suggests that individuals will allocate time to criminal behavior when its returns are higher than from other activities, net of perceived punishment costs and estimates of forgone illegal wages. That is, decisions to engage in crime suggest that offenders find the current net benefits of crime to be positive. Not only do labor market variables account for an individual's assessment, but factors including tastes and tolerances for risk, preferences for work, and time allocation also are part of the decision processes (see, e.g., Katz 1988; Taylor 1990).

One side of this calculus is returns of legal work, both personal (internal) and material. The legitimate earnings opportunities of low-skilled males deteriorated substantially from the mid-1970s through the 1990s (Topel 1993). Real earnings fell sharply for the least educated and for those in the bottom rungs of the earnings distribution. The exact magnitude of the decline in earnings depends on the specific measure of earnings chosen, the deflator, years picked, the age and skill group chosen, and so on, but drops on the order of 20 to 30 percent that accelerated in the 1990s are a reasonable estimate (Mishel and Bernstein 1994). Despite the putative job-creating effects of reduced pay, there was no offsetting improvement in hours worked or employment/population rates for the less skilled (see, e.g., table 2 above). To the contrary, hours worked over the year fell among those in the bottom rungs of the wage distribution (Juhn, Murphy, and Topel 1991); and employment-population rates for this group worsened in the 1970s (though not in the 1980s [Blackburn, Bloom, and Free-

man 1990)). The implication is that demand for less skilled male labor plummeted, as did its attractiveness for putative workers. Indeed, consigned to a secondary labor market, workers find these jobs readily available, but they generally pay low wages and have no permanence or career opportunities associated with them.

On the other side of the incentive equation are criminal earnings. However, few studies have measured illegal wages either cross-sectionally or examined changes in criminal earnings over time, and fewer have studied the intangible “tastes” and preferences that contribute to decisions to commit crime or work legally. There are significant obstacles to collecting accurate illegal wage data, such as valuations of non-cash exchanges, including discounts in fencing stolen goods. Moreover, since reliable official data (e.g., social security records) on illegal wages obviously are unavailable, the few efforts in this area rely on self-reports of crime frequencies and crime incomes. We summarize them in table 3 and review them below.

1. *Income from All Crimes.* Wilson and Abrahamse (1992) estimated illegal wages as the returns from an “average” offense among prison inmates. They used National Crime Victimization Survey (NCVS) data on average losses by victims to estimate the earnings from crime among prison inmates in three states (see Chaiken and Chaiken [1982] for details on the samples).¹¹ To compute a daily wage from crime, they estimated days free on the street per year after subtracting incarceration time and extrapolated to a full “work” year. Legal earnings were estimated at \$5.78 per hour, after discounting by 20 percent to reflect taxation. Summing across eight crime categories, they reported annualized crime incomes of \$2,368 (in 1988 dollars) for burglars and thieves with mid-level offending rates. Drug selling generated the highest returns (\$1,014 per year), and business robberies the lowest (\$29). For high-rate burglars and thieves, crime incomes were \$5,711. Wilson and Abrahamse claim that legal work would actually have paid more than crime for all but one type of offender: auto thieves. For high-rate offenders, crime incomes exceeded work incomes for all crime types. For reasons not stated by the authors, drug incomes (the most lucrative crime category) were omitted in the crime-work wage comparisons. Overall, the analyses by Wilson and Abrahamse (1992) show that self-reported crime incomes are consistently

¹¹ Finding no published estimates of losses from forgery and theft, Wilson and Abrahamse “guessed” (1992, p. 364).

TABLE 3
 Illegal Wage Estimates

Study	Data	Year	Annualized Crime Income (\$)
Wilson and Abrahamse (1992)	NCVS	1988	2,368 (mid-rate burglars) 5,711 (high-rate burglars)
Freeman (1991)	Three cities	1980	1,807 (active offenders)
Freeman (1992)	Boston	1989	3,008 (active offenders) 752 (infrequent offenders)
Freeman (1991)	Three State Prison Inmate Survey	1986	5,376 (high-rate offenders) 24,775 (prison inmates)
Viscusi (1986)	Three cities	1989 (adjusted)	2,423 (underreported by .33)
Reuter, MacCoun, and Murphy (1990)	Washington, D.C.	1988	25,000 (\$30 per hour)
Fagan (1992 ^b)	Two New York City areas	1987-89	6,000 (infrequent drug sellers) 27,000 (frequent drug sellers)
Hagedorn (1994 ^a)	Milwaukee	1987-91	12,000 (29%) 20,000 (20%) 36,000 (25%)
Huff (1996)	Five cities	1990-91	30/hour (reservation wage)
Grogger (1995)	NLSY	1979	11,476 (crime income as % of total income)

^a Drug sellers only.

low compared to estimated legal work incomes across all crime types and for both mid- and high-rate offenders.

Estimates of crime incomes in general adolescent populations were developed by Freeman (1992). A 1989 survey of Boston youths showed self-reported annual earnings that ranged from \$752 for infrequent offenders to \$5,376 for youths committing crime at least once a week. Hourly rates varied from \$9.75 for frequent offenders to \$88 for infrequent offenders in the Boston Youth Survey, suggesting a diminishing return from criminal activity. Average hourly wages from crime were \$19, and estimated hourly drug wages ranged from \$13 to \$21. All these estimates, including the lowest rate of \$9.75 from crime, exceed the average legal wage of \$7.50 that these young men reported and substantially exceeded their after-tax take-home pay of \$5.60 per hour. Freeman summarizes by stating that the lowest hourly pay rate from crime of \$9.75 "is seventy-three percent greater than take-home pay from a legitimate job, whereas the \$19/hour average from crime is over three times the take-home pay" (Freeman 1992, p. 230).

In a survey of adolescents in three cities (Freeman and Holzer 1986; Viscusi 1986*b*), crime incomes were \$1,607 in 1980 dollars or \$2,423 in 1989 dollars. However, Viscusi (1986*a*) adjusted these figures by a factor of three for likely underreporting. Using this revised income estimate, crime incomes accounted for one-fourth of the total income earned by the young men in the sample. Viscusi's model using the three-city sample also included a crime-versus-legal income variable. He compared illegal incomes among those who expected to earn such incomes, with incomes of respondents with low expected illegal income. He found significant upward positive effects of expected illegal wages on crime incomes, and the effects of these variables in regression equations on crime incomes were roughly twice as large as the influences on the actual crime participation rate. Viscusi (1986*b*) also compared the differences in legal and illegal incomes as a function of whether the respondent was working or in school. About one in five employed youths and one in eight students committed crimes, but their illegal incomes on average were only a fraction of their total incomes. Because of the skew in crime incomes, crime income was a substantial income supplement for many working youths. Among the NOJOBSCHOOL group, incomes were evenly divided between legal and illegal sources, but only one-half of this group participated in crime in the study year.

Once again, those participating in crime earned substantially more

from crime than from other sources. The results suggest that being in school or holding a job exerted significant downward pressure on crime participation, but only for crimes that had relatively low payoffs. Higher-income crimes such as drug dealing provided stronger economic incentives than the labor market could bear. Yet the mixing of crime and work appears to be a powerful trend. Legal incomes would have to sharply exceed illegal incomes to influence work decisions: Viscusi claims that equalizing legal and illegal wages would deter only one in six youths who participated in crime (1986a, p. 343).

Two studies measured illegal incomes using the NLSY. Although an illegal income amount was not reported, each study developed an estimate of illegal wages by multiplying respondents' reports of what fraction of their 1979 income came from crime by their total income estimate for that year.¹² According to Grogger (1994, 1995, 1998), crime income in 1979 was reported by 274 of the 1,134 respondents in the analysis (24.1 percent); mean income for this group was \$1,187, an estimate comparable to Freeman's (1991) estimate of \$1,607 for inner-city youths in Boston. Grogger also analyzed the NLSY data to determine the effects of legal wages on crime participation among males.¹³ Criminal participants worked fewer hours legally than nonparticipants and earned a lower wage. Hourly market (legal) wages were about 8 percent higher for respondents with no crime income (\$4.60) compared to those with criminal income (\$4.26).

Grogger (1998) also estimated a model of legal income using four predictors: market human capital, criminal human capital,¹⁴ nonlabor income, and abilities (the AFQT). Wages increase predictably with skill, experience, and ability and decline for those with probation sentences within one year of interview (about 15 percent lower in the following year but returning to prearrest trajectories after two years). Models estimated for crime income show that criminal human capital had predictably strong, positive effects. Crime incomes increased with

¹² Response categories for the percentage of income from crime were set in fourths, ranging from "none," to "about one-fourth," "about one-half," "about three-fourths," to "almost all."

¹³ Women were excluded from the analyses because of their lower crime participation rates. Males in school or the military were excluded to limit the sample to males for whom the primary alternative uses of time would be market work or crime. Males in jail from 1979 to 1981 (the first three years of the panel) were excluded since they were censored from legal work opportunities.

¹⁴ Criminal human capital was an index of criminal productivity and included prior criminal arrests, prior criminal convictions, family members with criminal records or convictions, and jail sentences during the ten-year analysis interval.

lower market (legal) wages, suggesting a rational allocation of time toward the higher income-producing activity. This finding is confirmed in Grogger's third model, an equation for market labor participation. The effect of legal wages on market hours is large: a 10 percent increase in wages leads to an increase in labor supply of sixty-seven hours, the equivalent of nearly two full work weeks (seventy-five hours). And, arrests and convictions had significant negative effects on market participation, as did criminal human capital. Finally, for each hour of crime, market labor supply appears to decline by about 1.4 hours.

We also analyzed illegal income using the NLSY 1979 and 1980 waves and detailed measures of the frequency of eleven income-producing crimes. In linear probability (regression) models of gross illegal income, little specialization was evident. Coefficients were significant for five crime categories: drug sales (two types), robbery, fraud, fencing, and running numbers (gambling assistance). Incomes from marijuana and "hard drug" sales had the highest coefficients by a factor of two compared to the next strongest predictors. But legal labor force participation also had a significant positive association with illegal income. Consistent with Fagan's (1992*a*, 1992*b*) study of drug sellers, involvement in multiple social networks from both work and deviant activities seems to expand opportunities for sale of illegal goods and services.

These studies suggest that young persons, especially males, appear to be particularly sensitive in their time allocation decisions to market incentives: legal work and criminal participation both are responsive to legal wages and criminal returns in the preceding year. That is, young males respond quite rationally to the economic returns to crime. Moreover, illegal wages appear to be quite elastic. Grogger (1998) concludes that a 10 percent increase in wages would reduce total criminal hours in the population by about 1.4 percent, with most of the change due to the overall participation rate but some also to the number of hours allocated by legally working men to crime.

While Grogger's analysis focused on individuals, Gould, Weinberg, and Mustard (1998) have obtained strong results using aggregate data from 352 counties over a seventeen-year period (1979–95). Using crime data from the Uniform Crime Reports and the Current Population Survey, they used retail wages to estimate the returns of legal work. The results showed the inverse relationship of wages with both property and violent crime rates. The effect is stronger for property

crimes: wage declines over the period contributed to a 13.5 percent increase in burglary, a 7.1 percent increase in larceny, a 9.2 percent increase in aggravated assault, and an 18 percent increase in robbery. Three other findings in the Gould, Weinberg, and Mustard analysis are noteworthy. First, the results are specific to young, unskilled men, the population group most likely to commit these offenses. Second, their analysis showed that several measures of unemployment were small contributors to crime increases, with predicted increases ranging from 1 to 2 percent, far lower than the predicted increases based on market wages. Third, wage and unemployment rates had larger effects on property crimes than on murder and rape. If market wages are the opportunity costs of crime, then raising these costs may predict declines in the crime rate over relatively short periods of time.

2. *Income from Drug Dealing.* Estimates of drug dealing income deserve special attention for two reasons. First, drug incomes usually are among the highest income-producing criminal occupations and show more pronounced effects of the returns from illegal work. Second, the expansion of street-level drug markets in the past decade has provided broader opportunities for illegal work during a time of declining legal wages and work opportunities (Johnson et al. 1990).

A survey of 186 convicted drug dealers in Washington, D.C., showed that "drug dealing is much more profitable on an hourly basis than are legitimate jobs available to the same persons" (Reuter, MacCoun, and Murphy 1990, p. viii). The dealers reported net (mean) monthly income of \$1,799 from drugs and \$215 from other crimes, which projects to an annual crime income of \$25,000, and an implied hourly rate of \$30 (see also MacCoun and Reuter 1992).¹⁵ Freeman (1992) points out that even if these men had worked full-time for a full year, their illegal pay exceeded \$19 per hour. These figures compare poorly with mean legal wages of \$1,046 per month or median legal monthly earnings of \$715 for the 75 percent who reported such income. Drug income rates were higher and more skewed for younger respondents aged eighteen to twenty-four. Moreover, drug incomes were far greater than other crime income sources and, unlike the general crime incomes reported by the Boston general adolescent population, did not diminish with frequency.

Drug incomes also exceeded legal (work) incomes by a wide margin

¹⁵ Because the income distributions were highly skewed, Reuter, MacCoun, and Murphy also report median net earnings of \$721 per month from drug sales, but \$2,000 per month among the 37 percent who reported selling drugs on a daily basis.

in a recent study of 1,003 drug users and dealers in two northern Manhattan neighborhoods in New York City (Fagan 1992*a*, 1994). Fagan divided the sample into nonsellers (fewer than two days per month selling), independent sellers, and sellers who worked in organizations or crews. More than half the males and one-third of the females were involved in either independent or organized drug selling during the three-year period from 1986 to 1988. Monthly drug incomes ranged from \$2,000 for nonsellers to \$4,800 for group sellers. (Nonsellers were able to produce drug incomes through barter or informal exchanges of goods and services or through incidental or infrequent sales.) After adjusting for average drug expenses of \$1,500 per month, net annual drug incomes ranged from \$6,000 to \$27,600. Over one-fourth of the sellers also had legal incomes, ranging from \$150 to \$750 per month. These estimates included off-book work and income from a variety of transfer payments and income supports. The percent of total income from legal, taxed wages ranged from 7 to 33 percent. Accordingly, like the Washington, D.C., sample of male dealers, legal work and crime were combined by many drug sellers in these two neighborhoods. Fagan (1992*a*, p. 121, n. 18) notes that there remain logical incentives for joint participation in legal work even while earning far higher incomes from drug sales: expanding networks of contacts, expectations of drug selling as a temporary occupation, and an escape route should legal or social pressures push sellers out of the business.

Fagan (1992*a*) also tested whether illegal incomes were substitutes for legal work and whether "tastes," especially drug consumption, accounted for illegal work. The effects varied by neighborhood. Legal work exerted a significant downward effect on total income in Washington Heights, a vigorous drug market, suggesting that legal work may actually pose an opportunity cost relative to crime incomes. He found no significant effect for human capital on illegal wages and concluded that the drug sellers and users were unlikely to hold legal jobs at unskilled labor wages. But models of legal work suggested that drug consumption (a proxy for taste/preference variables) did exert significant downward pressures on labor market participation. Nevertheless, legal workers did have higher education levels, and the two models together indicate that drug selling was a vocation for those who were detached from legal work and unlikely to do well in that context.

Gang members in Milwaukee reported a wide range of drug incomes (Hagedorn 1994*a*). Three in four of the 236 "founding members" of

fourteen male gangs (72 percent) had sold cocaine between 1987 and 1991. Of the ninety gang members interviewed, seventy-three were active drug sellers between 1987 and 1991. About one in four (28.7 percent) claimed they made no more money from drug selling than they could have made from legal work at the going rates for unskilled labor (about \$6 per hour). One in five (20.7 percent) earned the equivalent of \$7–\$12 per hour, and one in four (28.7 percent) reported drug incomes in the range of \$13–\$25 per hour, or \$2,000–\$4,000 per month. Few (three of the seventy-three sellers) reported “crazy money” (more than \$10,000 per month) at any time in their drug-selling careers (Hagedorn 1994a, p. 202). Mean monthly drug sale income was \$2,400, or about \$15 per hour, compared to legal monthly incomes of \$677.¹⁶

The fungibility of legal and illegal sources of income was examined by Huff (1996) in surveys of matched samples of gang and nongang youths in four cities. Respondents were asked about their “reservation wage,” the net income at which they would forgo illegal wages “to go to work legally.” Nearly all illegal income, for both gang members and neighborhood case controls, came from drug selling. Gang members reported reservation wages comparable to the wage thresholds reported by case controls, who were “at risk” youths from the same neighborhoods and demographic groups: \$30 per hour, the same wage levels earned by drug sellers in Washington, D.C., in the Reuter, MacCoun, and Murphy (1990) study.

Most of these studies depend on self-reports of illegal incomes. Accordingly, the validity and reliability of self-reports are crucial factors in estimating returns from crime. While Wilson and Abrahamse (1992) claim strong validity for self-reported crime incomes, both Viscusi and Freeman claim that crime rates and crime incomes are conservative estimates¹⁷ since criminal behavior is seriously underreported, especially for African American inner-city youths (Hindelang, Hirschi, and Weis 1981). Thompson and Cataldo (1986) directly question the veridicality of self-reports in their criticism of Viscusi’s (1986a) analysis. What is important for purposes of this essay is the consistency observed in the

¹⁶ To better illustrate the higher expected returns from drug selling, Hagedorn (1994a, pp. 202–3, table 2) reports: “The *maximum* amount of money earned monthly by any gang member for legal income was \$2,400, the *mean* for gang drug sales” (emphasis in original).

¹⁷ Wilson and Abrahamse (1992) draw on Chaiken and Chaiken’s (1982) analyses to suggest that self-reports and official records are stable within a factor of 1.5 (Wilson and Abrahamse 1992, p. 361).

effects of incarceration and early criminal involvement on later crime, work, and incarceration, regardless of whether crime and income are measured through official records or self-reports.

Research on returns from illegal work suggests the importance of net returns and illegal market incentives in explaining the relationship between crime and unemployment. Crime, especially drug selling, provides economic incentives for young inner-city males that raise income prospects in ways that legal markets cannot. Freeman, Fagan, and Viscusi found that those with higher illegal incomes did not possess characteristics conducive to success in legal labor markets. They either were detached from legal work or had been excluded as a result of the accumulation of legal sanctions. Moreover, as Hagan (1993*a*) also found, their greater involvement with gangs, organized drug selling, and other illegal activities suggests their social embeddedness in contexts that close them off from conventional opportunities. In samples of both drug dealers and general adolescent populations, illegal and total incomes were highest among those who were most active criminally, and these differed systematically from others with far lower criminal involvement.

C. Risk and Discounted Returns from Crime

The risk and extent of penalties is the third dimension of an economic calculus of crime. The returns from crime are in part a function of the likelihood of crime success or avoidance of punishment. Not only are crime returns forgone if one is incarcerated, but opportunities for legal earnings—however inferior they may be—also are lost. Moreover, if one is incarcerated, earnings on release will be reduced (Freeman 1992). Depending on the community, there also may be social costs from punishment through stigma and expulsion from socially rewarding networks. Overall, then, assuming that marginal offenders are risk averse, punishment creates a compensating differential premium for crime. In other words, punishment risk discounts the returns from crime.

How real is this discount? Consider the following example. Since the probability of incarceration increased in the 1980s, it is possible that the real rewards of crime actually fell, despite the fall in legitimate earnings for young men during the decade.¹⁸ The magnitude of the

¹⁸ The earnings of African American young males, who make up the majority of the prison population in the most urbanized states, fell far more through the 1980s compared with other demographic groups (Moss and Tilly 1991; Wilson 1996). Throughout

worsened job market opportunities for less skilled young men was sufficiently large—drops in real earnings of 20–30 percent, accelerating in the 1990s (Mishel and Bernstein 1994)—to have at least potentially raised their propensity to choose crime.¹⁹ We then weigh the reduced income probabilities against punishment risk. Using estimates from Langan (1994), we assume that the probability of imprisonment for robbery rose from 1974 to 1986 by 9.1 percent, and median time served was fifteen months. This increase in incarceration would cut an offender's legitimate earnings by about 11 percent ($1.25 \text{ years} \times .091$) during this time. This falls well short of the 30 percent lower return from legitimate work compared to crime.²⁰ The increased rate of incarceration should, net of other factors, discount the returns from crime (Freeman 1996*b*). But the decline in legitimate earnings neutralized the costs of punishment. In the short run, there is no comparative economic advantage from avoiding punishment, even in the face of increasing punishment risk.²¹

But what about the nonmonetary costs of punishment, such as harsh conditions, physical and sexual victimization, and social stigma on release? If incarceration carries with it substantial nonpecuniary costs, these increased costs might still have deterred many marginal offenders away from income-producing crimes. As we show below, the social stigma from incarceration has weakened greatly as the proportion of the population incarcerated increases. Nagin (1998) suggests that fear of stigmatization, which is the foundation of the deterrent effect, may be eroded by the escalating, very high incarceration rates of the past twenty years. The increase in the prison population will increase the percentage of the population with a prison record, making prison records commonplace and socially unexceptional (Nagin 1998, p. 73). This saturation is even greater when we consider the social and spatial concentration of prison records among nonwhite young males in cities.

Moreover, the heavy traffic between street and prison in high-crime

the 1980s, the position of these young men in the earnings distribution also fell as overall income inequality skyrocketed (Freeman 1996*a*).

¹⁹ The exact magnitude of the decline in real/relative earnings depends on the specific measure of earnings chosen, the deflator, years picked, the age and skill group chosen, etc., but it is invariably large.

²⁰ Langan (1994) calculated increases of 5.8 percent for burglary, 10.0 percent for larceny, and by over 20 percent for drugs. These are conservative estimates given punishment trends in the second half of the decade (Cohen and Canela-Cacho 1994; Tonry 1995; Blumstein and Beck 1999). Cohen and Canela-Cacho report that between 1975 and 1989, expected prison time for a violent crime nearly tripled.

²¹ A more detailed analysis would examine these tradeoffs over a work career.

neighborhoods spreads and popularizes prison culture, even making it perhaps a passage into adulthood, as well as an expected event of adolescence or early adulthood. The “prisonization of the streets” also discounts or mythologizes the harsh physical conditions of prison, further discounting punishment costs for young men in the population groups most likely to be incarcerated (see, e.g., Anderson 1997; Wilkinson and Fagan 1996).

There also is a contagious effect of involvement in illegal work that reduces social stigma. Crime activity has external effects on the level of crime activity of people in the same (peer) social networks: the crime activity of one person influences the preferences toward crime of others in the same age stratum in the same community (Glaeser, Sacerdote, and Scheinkman 1996). Also, increases in overall crime rates in a community can affect decisions to engage in crime by reducing the likelihood of apprehension for each individual (Sah 1991). Accordingly, if the psychic costs of crime are lower when others are committing more crimes, the crime decision of one person can affect crime involvement among others (Gould, Weinberg, and Mustard 1998).

Perceptions of illegal and legal earning potentials also weaken evaluations of the costs of punishment. Freeman (1996*b*) reported results from surveys with inner-city youths in Boston on perceived criminal and legitimate earnings and employment opportunities at the outset of the 1980s and at the end of the decade. In 1980, the NBER Inner-City Youth Survey asked youths in Boston, Chicago, and Philadelphia whether they thought they could make more “on the street” than in a legitimate job. It also asked them about their perceptions of the availability of criminal opportunities. The 1989 Boston Youth Survey, conducted at the peak of the booming “Massachusetts Miracle” job market, asked the same questions. Between these dates, the proportion of youths who reported that they could earn more on the street went up, from 31 percent in the three cities and 41 percent in Boston in 1980 to 63 percent in Boston in 1989. Similarly, the proportion who said they had “chances to make illegal income several times a day” roughly doubled over the period, to reach nearly 50 percent in 1989 (Freeman 1992). Huff (1996) reports a reservation wage of \$30 per hour to abandon illegal work, an unrealistically high rate but indicative of the perceived disparity among inner-city adolescents between legal and illegal incomes.

In sum, even when incarceration costs are factored in, the hourly rewards from crime seem to exceed legal wages for unskilled young

men subject to many of the risk factors for crime and incarceration. And the hourly returns from crime rose at a faster rate through the 1980s—while incarceration rates spiked—than did legal wages. Wages count heavily in the decision to commit crimes or work legally. And, as we show later on, the disparity between legal and illegal wages is widened even more by increasing social rewards from crime.

D. “Doubling Up” in Crime and Work

Whether individuals “double up” in legal and illegal work addresses several important issues. First, social embedment perspectives (Hagan 1993a) suggest that many youths are excluded from legal work as a result of their earlier involvement in crime and deviant social networks. But active shifting between work and crime occupations suggests greater human agency and job mobility that prior research on crime and work had assumed. Second, the decisions to maximize incomes by crossing legal boundaries suggest opportunities for interventions focused on investments in job skills and wages that could increase legal occupational status if suitable jobs were available. Investments in both skills development and job creation may bear on decisions to straddle the two worlds of work. Third, a high rate of doubling up suggests that an optimizing rather than satisficing model of decision making may be operating. Satisficing models (see, e.g., Cornish and Clarke 1986, pp. 181–82) suggest that individuals will select from among the first few alternatives rather than consider a longer set, one of which might provide greater returns. Satisficing may also entail nonmaterial returns, such as excitement or status (Katz 1988). But optimization suggests that their returns are maximized by carefully juggling and analyzing among alternatives. Unfortunately, doubling up has been a relatively neglected question in research on crime and unemployment. We briefly review some of the findings.

Doubling up appears to be quite common among active offenders, including drug sellers earning relatively high illegal incomes. Both studies of drug dealers discussed earlier suggest doubling up. More than one-fourth of the dealers in the Fagan (1992a) and Reuter, MacCoun, and Murphy (1990) studies were involved in work and crime. Illegal incomes were the same regardless of whether these people were also working legally. Among the general population studies, Viscusi (1986b) reported that about one in five employed youths committed crimes, one in eight students reported crime in the past year, and one-half of the NOJOBSCHOOL group committed crimes. Hagedorn

(1994a) reported that 75 percent of active gang drug sellers working in 1992 at the time of interview had sold drugs within the previous five years. Work was sporadic, however: respondents said they had worked only fourteen months in the past thirty-six in legal jobs, and only 25 percent worked in legal jobs more than twenty-four of the thirty-six months before the interview. Hagedorn (1994b) suggested that movement between legal and illegal work was common, a decision reflecting a combination of market (legal and illegal) conditions and other legal and social pressures.²²

Using the NLSY, we determined overlaps between crime and work. In 1980, the year when detailed crime information was available in the NLSY, 56.6 percent of those working reported any crime, and 20.5 percent participated in at least one income-producing crime.²³ Conversely, 74.4 percent of those involved in crime also worked, but only 33.8 percent of people reporting income-producing crimes also worked.²⁴ In fact, the percent working in 1980 in the NLSY did not vary significantly for those involved in any crime or in income-producing crimes (Freeman 1996b). The relatively high returns from drug selling would predict lower rates of doubling up, since drug sellers might be unwilling to allocate their time to legal work with its lower returns. But when drug selling is examined separately, there is little difference in employment rates between those who did and did not sell drugs: about 4 percent of those working sold drugs, and 4.8 percent of those not working sold drugs. Looking in reverse, more than two in three (69.2 percent) of the drug sellers reported also working legally in the survey year. This is a far higher figure than the rates reported by Reuter, MacCoun, and Murphy (1990) and Fagan (1992a, 1994). Only for those who ended up the following year in jail was there a substantial difference in employment rates (Freeman 1996b). Without detailed information on drug incomes, the motivations for working while selling drugs are hard to explain.

Doubling up and job switching contradict the perspective of the "formidable wall" that underlies much of the literature on crime and unemployment. It suggests an active process of optimization, in which

²² As pointed out by Hagedorn (1994a, p. 205), doubling up reflects the confusion of streetcorner lives depicted by Liebow (1967) in an earlier era in Talley's Corner: "Traffic is heavy in all directions" (p. 219).

²³ Robbery, sale of cocaine or heroin, sale of marijuana, grand theft, petty theft, shoplifting, frauds and "cons," aid to gambling activities, fencing, burglaries, auto theft.

²⁴ Using self-reports of any income from crime in the NLSY, Grogger (1995) estimated the "doubling up" rate at 25.6 percent.

offenders take advantage of economic opportunities that present themselves. Doubling up also reflects the coexistence of conventional and deviant values within individuals, a contradiction noted in delinquency research for decades (see, e.g., Cohen 1955; Matza 1964; Sullivan 1989; and Fagan 1990) and articulated in detail by Anderson (1998) as an adaptive strategy necessary for status and survival. Hagedorn (1994a) notes that gang members involved in drug selling had long-term attachments to women and most were “unhappily” (p. 215) enduring low-status, low-wage jobs that brought daily slights and personal humiliations. While offenders with criminal histories may face barriers to legal work, those without such barriers face fewer obstacles in “doubling up.” Taking a second job is quite common in the United States today, in work as diverse as skilled labor or door-to-door franchise sales. Highly decentralized drug markets offer the chance to earn income through occasional work at hourly rates that are widely perceived to be higher than conventional second jobs. There are few commitments of time and capital, although the risks of injury and incarceration are not trivial.

Doubling up may represent not so much a problem of the rejection of normative codes and behaviors, but of the closeness of the legal and illegal markets in many communities. Both historical and contemporary studies of immigrant and minority communities suggest that at both the normative and behavioral levels, the distinction between legal and illegal activities is more of a continuum than a sharp, distinct separation (see, e.g., Chin [1995] on Chinese gangs, and Sassen-Koob [1989] on the informal economy; see also Crutchfield [1995]). This trend can be seen in the fine line that exists between legal and illegal conduct in white-collar crimes and the extensive involvement of many ethnic groups in illegal gambling and liquor distribution schemes during the era of Prohibition and beyond (see, e.g., O’Kane 1992). The involvement of young males in these same neighborhoods today in drug selling and other income-generating crimes may be a continuation of the interplay of crime and work that is symptomatic of their peripheral attachment to the larger work force.

II. Crime as Work

There is a long, rich, and recently revived tradition of study of people who think about crime as their work. Many of the early studies on crime took an occupational perspective, emphasizing the “work” of crime and its similarities to conventional careers. Early descriptive

studies included Sutherland's *The Professional Thief* (1937), Shaw's *The Jackroller* (1930), Maurer's *The Big Con* (1940) and *Whiz Mob* (1964), Jerome Hall's *Theft, Law and Society* (1952), Donald Cressey's *Other Peoples Money* (1953), Ned Polsky's *Hustlers, Beats and Others* (1967), Bruce Jackson's *A Thief's Primer* (1969), W. J. Eistadter's (1969) study on armed robbery, Dan Waldorf's *Careers in Dope* (1973), and Peter Letkemann's *Crime as Work* (1973). These studies showed that, as in conventional careers, access is restricted to those with requisite background and skills and that these skills are taught and transferred in a manner not dissimilar to apprenticeships (Letkemann 1973, p. 8). They also show how conventional career concepts such as specialization, professionalism, apprenticeship, and work satisfaction are applicable to crime as work. More important, these early studies show the continuities between the socialization patterns of noncriminals and those criminals for whom crime is occupational.

Recent ethnographic research on inner-city youth has revived and updated these early studies on crime as work. These studies show the importance of illegal work in developmental sequences leading to adult joblessness and criminality and the contextual influences on these developmental outcomes. This literature describes how structural changes in neighborhoods and cities have influenced not only the income options and decisions of adolescents but also normative attitudes toward work and the sources of status available through social networks and social roles. The decline of manufacturing work has limited legal employment opportunities for inner-city youths²⁵ and has occurred in contexts of concentrated poverty and narrowing job opportunities (Wilson 1987, 1996) and racial and residential segregation (Massey and Denton 1993). The attractions of illegal work are reflected in variables often unmeasured in quantitative studies on crime and work, especially tastes and preferences.

In turn, structural changes have reshaped the composition of social networks, the salience of informal social controls, and access to non-material sources of social status (Sullivan 1989; Fagan 1992*b*). Fueled by economic restructuring (Kasarda 1989), the spatial concentration of poverty (Jargowsky and Bane 1990), and increasing residential segregation (Massey and Denton 1993), these neighborhood processes are difficult to capture in individual-level quantitative studies but are of

²⁵ In the past, manufacturing jobs have provided stable if not spectacular wages for people living in inner cities, and especially for African Americans (Farley 1987).

obvious importance as mediating processes that explain differences over time and across ecological units. The continuous effects of these changes across recent generations have contributed to new definitions of work that effectively blur legal boundaries and choices about income.

Recent ethnographic work illustrates how the abandonment of legal work has been accompanied by shifts in conceptions of work among young men and women in poor areas. Anderson (1990, 1994) describes how young males in inner-city Philadelphia regard the drug economy as a primary source of employment and how their delinquent street networks are their primary sources of status and social control. Similar accounts were offered by Hagedorn (1988, 1994*a*, 1994*b*), Taylor (1990), Moore (1992*a*, 1992*b*), and Padilla (1992, 1993). Participants in the illegal economies in inner cities were engaged in a variety of income-producing crimes, including drug selling, fencing, auto theft, petty theft and fraud, commercial extortion, and residential and commercial burglary. In diverse ethnic communities in cities far apart, young men use the language of work (“getting paid,” “going to work”) to describe their crimes.²⁶ The confounding of the language of illegal and legal worlds of making money seems to signal a basic shift in the social definition of work. For the young men using this language, money from crime is a means to commodities that offer instrumental value as symbols of wealth and status.

Much of this illegal work is organized within ethnic enterprises combining shared economic and cultural interests. For gangs in these cities, there is less concern than in the past with the neighborhood or the traditional “family” nature of gang life. Moore (1992*a*) shows how gang members with limited exits from gang life remained longer in the gang, assuming leadership roles and manipulating the gang for their own economic advantage through perpetuation of gang culture and ideology. Chin and Fagan (1994) and Chin (1995) describe the complex economic relationship between street gangs and adult social and economic institutions in three Chinatown neighborhoods in New York City. The adult groups, descendants of the tongs that were the shadow governments in Chinatowns a century ago, are involved in both legal, well-respected social and business activities and a variety of illegal

²⁶ See Sullivan (1989); Williams (1989); Taylor (1990); Padilla (1992); Bourgois (1995). For example, Felix Padilla describes how gang members in a Puerto Rican Chicago neighborhood regarded low-level drug sellers in their gang as “working stiffs” who were being exploited by other gang members.

businesses that employ street gangs. The gangs guard territories and act as surrogates in violently resolving conflicts and rivalries between the adult groups. Chin (1995) concludes that the gangs prosper economically while functionally maintaining the cultural and economic hegemony of these ambiguous adult leadership groups. Moreover, the gangs are involved in a variety of income-producing activities, especially commercial extortion, that are shielded from legal pressures by cultural processes that tolerate and integrate their activities into the social fabric of everyday life in Chinatown (Chin and Fagan 1994).

Padilla (1992) describes how the new pattern of exploitation of lower-level workers (street drug sellers) in the gang was obscured by appeals by older gang members to gang ideology (honor, loyalty to the gang and the neighborhood, discipline, and ethnic solidarity) combined with the lure of income. Taylor (1990), describing drug gangs in Detroit, and Padilla (1992) also write about the use of money rather than violence as social control within African American and Latino drug selling gangs—if a worker steps out of line, he simply is cut off from the business, a punishment far more salient than threats to physical safety. Drug-selling groups in these two studies superficially are ethnic enterprises but function more substantively as economic units with management structures oriented toward the maintenance of profitability and efficiency. The institutionalization of these sources of illegal work, and their competitiveness with the low-status and low-income legal jobs left behind after deindustrialization, combine to maintain illegal work careers long after they would have been abandoned in earlier generations.

Patterns of illegal work vary in this literature. Some abandon legal work after a period of employment, others drift in and out of legal work, and a few seem from the outset to choose exclusive “careers” in illegal work. Sanchez-Jankowski (1991, p. 101), for example, claims to have found an “entrepreneurial spirit” as the “driving force in the work view and behavior of gang members” that pushes them to make rational decisions to engage in the profitable worlds of drug sales or auto theft. Hagedorn (1994*b*) describes how gang members drift in and out of legal work over time, with decisions closely bundled and often reciprocal. Hagedorn shows that among Milwaukee gang members income from drug selling far exceeded incomes from legal work. However, many in the drug economy “appeared to be on an economic merry-go-round” (Hagedorn, 1994*b*, p. 205), continuing to look for legal work, despite its lower wages, low status, danger, and part-time

nature. But for others, the hazards and indignity of low-wage and low-status legal jobs discount the returns from legal work and ultimately lead to its rejection. For example, Bourgois (1989, p. 641) claims that drug dealers who leave legal jobs to embrace the risks and rewards of drug selling are evidence of a "culture of resistance," preferring the "more dignified workplace" of drug selling than the low wages and "subtle humiliations" of secondary labor markets where racism dominates work conditions and social interactions.

Structural changes, especially the decline of manufacturing and unskilled labor, have contributed to the continuity of these views into adulthood. Manufacturing jobs traditionally provided "exits" from gang life and eased the transition from adolescence to adult social roles. Millions of these jobs have disappeared since the 1960s. Hagedorn (1988), Sullivan (1989), and Taylor (1990) showed how neighborhoods in the past reproduced their employment patterns in succeeding generations through networks of job referrals. Today, what is reproduced is joblessness (Tienda 1991; Wilson 1991).

The changes in the structure of employment shaped not only job outcomes for young adults but the outcomes of early legal problems as well. Sullivan (1989) tells how early involvement in crimes was normative in three ethnically diverse neighborhoods, but the outcomes of arrest varied by neighborhoods. White families helped resolve disputes informally, using family support and job networks to soften the potential stigma of arrest. With high rates of joblessness, nonwhite families had few social buffers or job networks between them and the legal system. Not only did they lack access to job networks, but also their families were of little help when their income-producing crimes (robberies) evoked official responses. Their disrupted job networks were unable to mitigate legal problems or ease the school-to-work transition, contributing to the continuity of criminality and adverse legal responses. In contrast, youths in predominantly white neighborhoods were able to make sometimes difficult but successful escapes from adolescent crime networks. Hagan (1993*b*) links this to processes of social embeddedness that truncate future options and amplify the adverse effects of adolescent entanglements in the legal system.

These processes were institutionalized in many inner-city neighborhoods by the twin processes of deindustrialization and expansion of drug economies. Fagan (1992*b*) describes the sequence of changes in eight neighborhoods in six cities, from the decline of manufacturing through the disruption of intergenerational job networks and social

controls, through the institutionalization of illegal work, especially in drug selling. The growing social isolation, resulting from concentrated poverty and segregation, gave rise to a skewed emphasis on exaggerated displays of material wealth as a source of status (see also Anderson 1990, 1994). Motivations for the perceived higher returns from illegal work were influenced by such tastes for quick “crazy” money (Anderson 1990) and were important components of decisions to engage in illegal work.

The ethnographic literature is consistent with longitudinal and other quantitative studies in several respects. Both literatures reverse the conventional assumptions of macro-level research about the temporal ordering of crime and unemployment: most adolescents were involved in income-generating crimes well before they sought (or considered) the legal labor force. Both in the ethnographic and longitudinal quantitative literatures, the effects of incarceration in early adolescence carried over to adult employment and crime outcomes. The protective influence of human capital variables was evident as well (see, e.g., Padilla’s description of avoiding gang involvement).

III. Abandoning Crime for Legal Work

Many offenders drift back and forth over time between legal and illegal work. Hagedorn (1994*b*), for example, shows how drug dealers move back and forth between legal and illegal work, at times doubling up and at other times specializing. There has been little research on how these changes come about, how often they occur, individual differences in shifts, or the decision processes that result in changes. However, there has been research, much of it based on qualitative life history analyses (Frazier 1981), on desistance from criminality. Many of these studies describe a gradual shift over time from crime careers to relatively mundane conventional careers. Many of these studies describe desistance from criminal careers for people who were deeply embedded in deviant social networks and who had accumulated many of the social and human capital deficits that seem to predict adverse employment outcomes. What is instructive are the lessons regarding how the decision heuristic changes with advancing age.

Research on “career” robbers and burglars, drug users and sellers, and juvenile offenders describes factors and processes that influence persistent offenders to abandon illegal work.²⁷ In most cases, desistance

²⁷ See, e.g., Mulvey and LaRosa (1986) on juvenile offenders; Shover (1985, 1995) and Tunnell (1992) on burglars; Cusson and Pinsonneault (1986) and Irwin (1970) on rob-

centers around a process ascribed to “aging out,” in which there is a shift in the calculus of rewards and costs of criminality. An accumulation of aversive experiences, changes in personal circumstances, and contingencies in neighborhoods or crime opportunities all may lead to the decision to desist from crime. Greenberg (1977) and Biernacki (1986) concluded that “occupational” criminality may be incompatible with family demands or with holding down a steady (legal) job. Biernacki (1986) also showed that desistance from heroin use and attendant crime was contingent on reversing the addict’s immersion in the subcultures and social worlds of addiction and, conversely, isolation from more conventional roles and norms. Reestablishing ties with legitimate activities and social networks was far less difficult for those who had not drifted very far, but more difficult for others. Having decided to quit, successful desisters relied on social networks of nonaddicts for support and maintenance of their new roles as well as for access to job contacts and networks.

Fagan (1989) analyzed the desistance literature and identified the sequence of stages leading to decisions to quit and stay away from crime. The decision to quit was often preceded by a series of adverse consequences or social sanctions from illegal work. A combination of pressures—family, legal, health, and a changing view of their former social world—preceded the decision to quit. Some were motivated by the threat of loss of loved ones or children, others by the threats of social sanctions from peers or neighbors, and still others by a desire not to face incarceration (again). Many described how their social supports for illegal work were weaker or disappeared. Some mentioned the physical costs: crime was more difficult to complete successfully, and the anxieties it aroused took an increasing emotional toll (see, e.g., Shover 1985; Cusson and Pinsonneault 1986). For some, decisions were “spontaneous” or were described as instant conversions to another way of life (see, e.g., Biernacki 1986; Mulvey and LaRosa 1986).

Adler’s (1985, 1993) portrait of drug dealers shows the difficulty of detaching from illicit work that extends beyond the net of legal and illegal returns. Many drug dealers resolved and attempted to leave illegal work but found the conventional world boring. Their return to dealing was motivated less by income than by their “withdrawal” from the excitement of their illegal work. Biernacki also described the bore-

bers; Adler (1985, 1993) on drug dealers; Biernacki (1986) on opiate addicts who also were involved in a variety of income-producing crimes. See also Fagan (1989) on a conceptual model for spousal assailants.

dom of the "straight" world for many former addicts. Transition from illegal work became episodic, with periods of cessation increasing in length and frequency until becoming final. But the longing for excitement (or psychological and physiological cravings, as described by Biernacki) persisted well after the illegal behavior was abandoned. Other voices in this literature discuss the intrinsic rewards of the "life," while diminishing the salience of its costs. There are important roles of tastes, intrinsic rewards, status rewards, and even emotional thrills (Katz 1988) from illegal work and its social context in the decision to persist in crime. These factors are difficult to control or defeat in the process of desisting from crime and may play a central role in heuristic processes to persist in illegal work.

These rewards often provide powerful reinforcements. Fagan (1989, p. 408) notes that "With social embedment comes the gratification of social acceptance and social identity. The decision to end a behavior . . . implies withdrawal from the social reinforcement it brings" and fear of social rejection in new networks. Maintaining the decision to quit illegal work required the construction of new social networks, changes in physical locales, changes in self- and social identity, changes in the functional definitions of crime, substitution of new social roles and behaviors for the old ones (including legal work), new sources of social reinforcement for legal work and a conventional lifestyle, and the development of a strong belief system in the soundness of these changes (Fagan 1989, p. 403).

However, desisters rarely mentioned economic logic in their decision making. Although desistance has been characterized as a predictable process associated with advancing age (Hirschi and Gottfredson 1983; Farrington 1986), no theoretical meaning has been attached to the age curve. Desistance studies suggest that with age, there are changes in the heuristic processes that offenders use to assess the costs and benefits of crime commission (Clarke and Cornish 1985). Their decisions were unrelated to access to legal work and were based more on changing perceptions and evaluations of nonlegal social sanctions from illegal work. While they perceived little change in the returns of illegal work, desisters seemed to increase their evaluations of the potential sanction costs of their crimes: loss of loved ones, rejection by social peers, and self-rejection. This changing evaluation of external costs was preceded by internal changes in their self-perceptions.

Accordingly, one consequence of advancing age is a substantive shift in the utility function underlying decisions to engage in illegal work.

Evaluation of the costs of illegal work seems to change with age, although perceived returns from illegal work seem undiminished. Because youth participation in crime is highly responsive to legal wages (Grogger 1995), an alternative explanation suggests that declining crime participation with age may reflect expectations of higher earning potential from legal work. In addition, factors born out of new social roles (marriage, adult friend, father) and informal social control appear to receive increasing weight with age. Perhaps also the weight accorded to tastes and “thrills” diminishes with age or is defeated by other emotional states such as anxiety and fear. The revised calculus of illegal work also seems to be shaped by the social contexts of everyday life that offer new social roles, perceptions and conceptions of work, and by changing self-identity and emotional states.

IV. Directions for Theory and Research

Research on the interactions among crime, work, and unemployment has been limited in several ways. For example, most efforts reflect theory and methods of specific disciplines; conceptual and methodological integration is rare. Measures are inconsistent and often indirect. Single samples are more common than multiple samples to address period and cohort effects. In this section, we start the summary of directions for future research with the bad news on the limitations of current knowledge. But even with these gaps, we identify important areas where the literatures converge, leading to more optimistic views and promising directions for theory and research. We conclude with an agenda for research.

A. Methodological Dilemmas

Specifying the crime-unemployment relationship is complicated by a bifurcation in the empirical literature. It is difficult to compare single-period, cross-sectional models of individual choices with longitudinal studies. In the single-period studies, crime and work are presented as alternative choices only because of the limited time period measured, overlooking variation over time. Several studies have used data that have at least two time points (e.g., Gottfredson 1985; Good, Pirog-Good, and Sickles 1986), while only a few others (Thornberry and Christenson 1984; Farrington 1986; Viscusi 1986*a*, 1986*b*; Freeman 1992; Nagin and Waldfogel 1995; Bushway 1996) used panel data extending over several years. Crime and work are events that are likely to occur close in time. The use of annual observations data over

lengthy time periods makes it difficult to determine whether crimes occurred during periods of unemployment, underemployment, active employment, or exile from the labor force.

Second, studies of crime and unemployment often omit (legal) deterrence variables that are necessary to compute how individuals discount the returns from legal work based on the potential punishment costs. This is especially important considering that deterrence variables are significant in macro-level studies, often outweighing the importance of labor market variables in the explanation of crime. When included, deterrence usually is measured indirectly using aggregate city-wide arrest rates or probabilities (see, e.g., Good, Pirog-Good, and Sickles [1986]; but see Witte and Tauchen [1994] for an exception), but rarely is it measured as the individual's perceived likelihood of sanctions. This is particularly problematic since crime rates at the neighborhood level and arrest probabilities are not independent (Smith 1986). Accordingly, we are likely to observe both intracity and intercity effects when multi-city samples are used, similar to the fluctuations in labor market variables. This suggests the need for careful specification and disaggregation of deterrence variables at the level of neighborhood and city, and the use of hierarchical models to estimate the simultaneous effects of macro-level forces with more proximate neighborhood effects.

Third, estimates of the work-crime association have been confounded with sampling strategies. Comparisons of general population samples that span broad ecological areas create risks of correlation-causation confounding due to the concentration of crime and unemployment in subareas. Research with prison releasees (e.g., Berk, Rossi, and Lenihan 1980; Witte 1980) or intervention program participants (Good, Pirog-Good, and Sickles 1986) may have samples with truncated distributions of human capital variables and concentrations or "ceiling rates" of other risk factors. Similarly, studies that use "street" samples of offenders may effectively control for neighborhood factors but also risk truncated or unmeasured human capital variables (e.g., limited work experiences) (see, e.g., Fagan 1992*a*). Studies with adult samples may overlook the important events during adolescence that shape later work outcomes.

Fourth, despite the central role of expected returns in economic models of crime and unemployment, measures of illegal wages have been weak, if measured at all. Returns from legal work have been measured in dollars, occupational status, and in labor market participation.

But measurement of returns from illegal work is quite rare (see, for exceptions, Viscusi 1986*a*; Reuter, MacCoun, and Murphy 1990; Fagan 1992*a*, 1994; Hagedorn 1994*a*). Other studies use proxies or estimates (e.g., Wilson and Abrahamse 1992; Grogger 1994, 1995; Freeman 1996*b*). Just as labor markets vary across neighborhoods within cities and across cities themselves, so too do illegal markets, especially drug markets (Fagan 1992*b*). Measurement of illegal wages and illegal labor market participation is critical to both sociological and econometric specification of crime decisions and the effects of unemployment. Thus there are intrinsic weaknesses in estimates of the net utility of legal versus illegal work.

A corollary problem is evident in the measurement of crime. Not only are the economic returns from crime not measured, but the measures of criminal activity themselves vary extensively as well. The published commentary of Thompson and Cataldo (1986) on the Viscusi articles reflects the split among analysts on whether self-reports or official records provide more reliable measurement of crime. Like many criminologists, the economists Thompson and Cataldo questioned the validity of Viscusi's results based on offender self-reports of criminality. These weaknesses lead many researchers to hold their noses and use official records of police contacts or arrests, despite their validity problems at the individual level (Elliott and Huizinga 1986).²⁸ Moreover, the analytic aggregations of crime measures also are quite limited. Many studies use gross, dichotomous measures of any police contact, while others use arrests. This distinction is particularly problematic in studies of adolescents since many police contacts are resolved informally. Many studies avoid measures of crime frequency since their distributions often are skewed. Others fail to distinguish types of crime, collapsing instrumental (income-producing) and "expressive" (often violent) crimes into single scales. Yet the distinction between income-producing and other crimes is particularly critical to models specifying actions based on estimates of returns from crime. Official records also seem particularly ill suited to measuring returns

²⁸ Others are more cautious about using self-reports. Thompson and Cataldo (1986) criticize Viscusi (1986*b*) for exclusively using self-reports. Viscusi failed to detect the absence of muggings, burglaries, and robberies in the self-reports in his sample and fails to note the typical age-crime relationships found in a wide range of criminological studies (see, e.g., Hirschi and Gottfredson 1983; Gottfredson and Hirschi 1990). Yet Elliott and Huizinga (1986), using a general population sample, claim that the extent of underreporting in arrest statistics is overwhelming for nearly all crime types, and the underreporting factor increases with the frequency of self-reported crime.

from illegal work. Using estimators from other datasets for the value of stolen goods or drug income ignores the importance of individual differences in skills on the total income from crime or drug sales.

Fifth, as we discuss in more detail later on, there have been significant changes in legal and illegal labor markets over the 1980s and in the social processes in inner-city neighborhoods that may affect decisions about crime and work (Wilson 1991, 1996). The percentage of "unskilled" young males in inner cities grew throughout the 1980s (Mangold 1994). The returns from both legal and illegal work changed significantly throughout the decade, creating the possibility of shifts in the decisions of inner-city youths toward illegal work. So too did tastes and preferences (Fagan 1992*b*). These changes introduce period effects that complicate comparisons of earlier studies with more recent efforts. For example, manufacturing and unskilled labor jobs, the types of jobs typically available to youths in economically distressed inner-city neighborhoods, declined throughout this period (Kasarda 1992). Wages for minority youths remained flat, even in a tight labor market in the mid-1980s (Blackburn, Bloom, and Freeman 1990; Bound and Freeman 1992; Freeman 1992).

A variety of factors complicated access of young African American males to legal work (Kirschenman and Neckerman 1991; Moss and Tilly 1991), increasing search costs and devaluing the returns from legal work. These factors also influenced the supply of young men to crime (Freeman 1996*b*). Arrests and incarceration of young African American males increased throughout the 1980s (Irwin and Austin 1994; Tonry 1995), again posing barriers to legal employment and, according to the crime-causes-unemployment view, decreasing labor force participation. Finally, illegal markets (especially drug markets) expanded contemporaneously with the decline of legal work in inner cities (Fagan 1993), while informal social controls and social capital declined precipitously throughout the preceding decade (Sampson 1987; Wilson 1987; Sampson and Wilson 1994). Accordingly, we may assume that the outcomes of work decisions reflected the growing imbalance between legal and perceived illegal returns in drug markets and other illegal work for inner-city youths. These period-specific effects also suggest that past research may not be applicable in the future. The aggregate effects of high rates of joblessness may create problems of scale that affect individual probabilities of successful outcomes.²⁹

²⁹ If, e.g., crime rates increase beyond some threshold, employers may flee cities or regions for safer environments for their workers. A perception of an unskilled labor force

B. Theoretical Domains

Despite these gaps, there are several consistent themes for building a foundation for theory and research. First, early involvement in crime and incarceration as an adolescent have negative effects on employment and positive effects on crime in later adult years. Both longitudinal and ethnographic studies place delinquency before unemployment in the sequence of developmental events over the life course. Studies based on data from the United States, England, and other European countries consistently identify the legacy of adolescent experiences for future work outcomes. Sampson and Laub (1993) suggest that adolescents “mortgage” their future job stability and work outcomes through adolescent involvement in crime but that incarceration intensifies these effects over the life course. The importance of family context, especially parental criminality rather than parental unemployment, suggests important leverage points for intervention. The effects of high rates of incarceration for today’s adolescents, especially African Americans, may be compounded in the labor market outcomes of their children in another generation.

Second, crime does in fact appear to pay for many offenders. In the few studies that have measured returns from crime, there are calculable market incentives from illegal work. Perhaps more than other types of crime, drug dealing seems to provide substantial earnings above what legal work pays. Careers in illegal work also accord relief from the mundane and often abusive conditions encountered by nonwhites in white-owned businesses. The returns from what Bourgois (1989) terms the “Horatio Alger” benefits of illegal work are difficult to calculate but carry value even in the face of the absence of a net increase in monetary returns.³⁰ However, the data on illegal wages are extremely limited, and extensive research is needed to analyze the role of market incentives in decisions about legal and illegal work.

Third, human capital and early work experiences are protective factors that help avoid poor job outcomes and illegal work in early adult years. Even in models of work outcomes showing the effects of early crime and incarceration, there are consistent positive effects from human capital variables on legal work outcomes in early adulthood. The

may also motivate employers to relocate their businesses to places with higher productivity, lower wages, more skilled workers, or less troublesome employees.

³⁰ Bourgois writes of how drug workers are willing to work under difficult working conditions, with no benefits and substantial health and safety risks, to escape the humiliations they encounter daily in low-wage service and manufacturing jobs.

measurement of human capital varies widely in crime and unemployment studies, and further research is needed using measures of human capital that are truly independent from work outcomes. The use of AFQT scores provides one such independent measure. The importance of social capital also has been shown but has received far less research attention (cf. Sampson and Laub 1993). Human and social capital overlap through job networks and referrals and through the social embedment of work experiences in social networks where both skills and personal relationships are exchanged.

Fourth, the effects of legal deterrence variables, or the punishment costs of crime, are inconsistent and remain unknown pending further study. In macro-level studies, deterrence variables appear significantly to depress crime rates. In individual-level studies, analyses of deterrence strategies are marked by inconsistencies in conceptualization and measurement. Deterrence rarely is disaggregated by neighborhood or area, even though arrest probabilities vary within and across cities. Measurement usually is limited to the threat of arrest, not of incarceration. Occupational risk also is not included, even in drug selling where injury rates are quite substantial (Fagan and Chin 1990). There are several dimensions of deterrence, but usually only perceived sanction threat, or actual sanction, is included (Nagin 1998). However, incarceration risks may be tolerable or even expected and may be only a minor discount on the net returns from illegal work. A fully specified deterrence model should include also how important these risks are perceived to be and whether a high risk would actually influence illegal work decisions. It also should address the discount on informal sanctions in neighborhoods where work is infrequent and its rewards are limited.

Finally, there are threshold effects in the structure of opportunity that can launch social processes undermining both monetary and non-monetary incentives to work and that support definitions of crime that are conflated with work. In Wilson's (1996) comparison of Mexican and African American neighborhoods in Chicago, he describes the effects of social and spatially concentrated joblessness on work and crime. He notes a process in which the disappearance of jobs in one generation disrupts attachments to work that are reinforced through within- and between-generation interactions around work and income. Under these circumstances, (legal) work is no longer a regulating social process. The cultural isolation that develops in this vacuum shapes definitions and conceptions of work that erode its social value. This

“cultural disorganization” accompanies social disorganization to establish conditions in which crime can flourish. The process is reinforced by the expansion of illegal opportunities, including both drug dealing and everyday hustling. Cultural adaptations that develop in these circumstances support the conflation of crime and work. These adaptations to the systematic blockage of legal opportunities for income production are intensified when they are spatially and socially concentrated in closed social networks (see, e.g., Hannerz 1969; Rainwater 1970). In this context, access to illegal opportunities furnishes material returns and social status that is unavailable through legal work and that compromises whatever vestiges of legal work norms that remain.

Together with recent ethnographic literature, Wilson’s view helps explain the growing isolation of inner-city adolescents from the worlds of conventional work. With limited access to legal work, and in segregated neighborhoods with high concentrations of joblessness, alienated views of legal work and diminished expectations for conventional success spread through social contagion and become normative (Tienda 1989). Tastes and preferences are driven by definitions of status dominated by material consumption. Violence substitutes for social control as a means to resolve disputes and attain status (Katz 1988; Sullivan 1989; Anderson 1994), increasing the likelihood either of mortality or incarceration. Legal work at low pay is defined poorly and carries a negative social stigma (Bourgois 1989; Taylor 1990). With intergenerational job networks disrupted, the ability of young people to gain access to increasingly complex labor markets with limited human capital or personal contacts foretells poor work outcomes. What starts as a growing class of unskilled workers in isolated neighborhoods quickly becomes a means for social contagion and rapid detachment from legal work.

We apply the framework of Uggen (1996) and Uggen, Piliavin, and Matsueda (1992) to discuss the theoretical implications of the work-unemployment literature. Support for four broad theoretical frameworks is evident in the empirical literature, and the causal mechanisms they specify suggest opportunities for convergence and integration.³¹ Choice, opportunity, and labeling perspectives have dynamic properties that include both structural elements and the processual elements

³¹ These perspectives may reflect the special conditions of disadvantaged communities with job markets that are structurally distinct from the job markets in more advantaged areas. There are important contextual influences on the link between legal and illegal work at both the individual and aggregate levels.

necessary for a theory of individual development and work outcomes. We add to these theories borrowed from ethology to formalize observed behaviors in the search for income. We briefly review these perspectives and the prospects for theoretical synthesis.

1. *Econometric Choice Models.* Economic and choice theories have been the most common basis for empirical research. They portray crime as the result of a decision to seek the (perceived) higher rewards of the illegal labor market compared to the legal market, adjusted for the potential punishment costs of illegal behavior (Becker 1968; Ehrlich 1973). Rational choice theorists (Clarke and Cornish 1985; Cornish and Clarke 1986) extended this model by assuming that offenders in fact do proceed according to a heuristic process, but this heuristic model includes elements of income satisficing as well as income optimization. Others (Block and Heineke 1975) claimed that a process of neutralization is necessary to permit ethical decisions to engage in crime and that psychic rewards also figure in the decision to engage in illegal work (see, e.g., Katz 1988; Grasmick and Bursik 1990). Choice theorists also have used economic choice models to explain deterrence (Miller and Anderson 1986).

There is some support for the economic position in this empirical literature, and choice models have obvious importance in a theoretical model of work decisions. The role of market incentives suggests that crime indeed pays compared to the types of work available to criminal offenders, particularly for drug sales. There are important roles for status and psychic payoffs from illegal work, particularly in social contexts where crime participation is high, labor force participation is low, and crime provides a skewed form of "occupational status." That is, the status and personal costs of legal work motivate selection of illegal work. Participation in illegal work also may reflect the proximity of illegal work compared to low-wage legal work and a choice to minimize search time or circumvent lengthy job queues.

Accordingly, the decision to select illegal work may indeed reflect its net benefits and structural features of labor markets for urban youths and young adults. If the distribution of opportunities is uneven and skewed away from inner-city urban areas, decisions to seek illegal work may reflect the income-satisficing model of decision making (Cornish and Clarke 1986). Moreover, the role of deterrence in economic choice seems clear, yet it has been studied inconsistently. Sociological tests of deterrence often focus on the risks of deviance, discounting the rewards of offending. Even so, there is only weak support

for the deterrence components of this model compared to criminal rewards (e.g., Piliavin et al. 1986).

2. *Opportunity Structures.* According to opportunity theories, difficulty in attaining conventional goals—affluence, social status—creates conditions of anomie or strain, leading to criminal pursuits (Cloward and Ohlin 1960; Agnew and White 1992; Paternoster and Mazerolle 1994). These themes are evident in the ethnographic literature. Young males and females have turned to a wide variety of informal economic activities, some of them illegal, as stable and well-paying legal jobs became more scarce. Uggen (1996) calls them innovators who reject low-wage legal work and embrace illegal work in pursuit of the twin goals of affluence and social status, while Sanchez-Jankowski (1991) notes their independent spirit of entrepreneurship. Throughout the ethnographic literature, young males in different neighborhoods and ethnic groups report the coexistence of conventional and nonconventional goals, signs that their frustrations with the legal labor market in part motivate their decisions to seek illegal work.

Barriers to conventional success may result from job scarcity or access to work that provides status and monetary reward. In some neighborhoods, the distribution of opportunities is such that unemployment is as common as employment among nonwhite adolescents, and there are more illegal than legal opportunities. Wages reflect these persistent trends (Bound and Freeman 1992). Wages for unskilled workers in the United States are far lower than in other industrialized Western countries, and this disparity has grown steadily for nearly three decades (Freeman 1994). Legal opportunities appear to be low-status, low-paying, and generally exploited labor (Padilla 1992; Hagedorn 1994a), and expansions in the workforce appear to be in “contingent” jobs rather than “permanent” ones (Freeman 1994). The effects of declining wages and opportunities are strongest for unskilled workers, the group of working-age men with the highest crime rates.

In these conditions, detachment from legal work has become normative; illegal activities are defined as “work,” and the returns from crime as “getting paid” (Sullivan 1989). Pursuing “conventional” goals through illegal work has become dangerously close to becoming institutionalized in an oppositional culture, just as legal work may become the exception for a “growing underclass of the unskilled” (Wacquant and Wilson 1989; Mangold 1994). Recent studies in Canada suggest similar dynamics (Baron and Hartnagel 1997; Hagan and McCarthy 1997). Accordingly, the importance of the balance of opportunities for

the decision to seek illegal work is another central feature of the crime and unemployment relationship.

3. *Labeling.* The exclusion of incarcerated young offenders from legal work is evident in the longitudinal studies of Sampson and Laub (1993) and Freeman (1992). In the labeling perspective, early involvement in the criminal justice system has sustaining negative effects on future behavior. The mechanisms are compounding. Excluded from legal work by criminal records, young offenders in turn may come to define themselves through that label. This may lead to further embedment in deviant networks and a deepening self-concept as an outsider to legal work. Accordingly, the label has both exogenous effects for employers and psychological effects for the individual seeking work. Such labels may attach and persist even before individuals seek access to legal work. Through parental criminality, adolescents may be embedded in social networks that are outside conventional job networks (Hagan 1993*a*), leading to early criminal involvement and the attachment of a legal sanction that in turn may exclude young people from future legal work.

4. *Work and Crime: A Foraging Model.* Treating the decision to engage in crime as a dichotomous choice between legal and illegal work misses an important aspect of criminal activity. Because most offenders work outside of criminal organizations, and because the U.S. job market is characterized by considerable mobility and flexibility, it is easy to combine work with crime at one time or to move between the two activities over time. These decisions are simplified and facilitated not only by labor mobility but also by the distribution of criminal opportunities and restraints in neighborhoods where crime often is concentrated (Sampson 1987; Massey and Eggers 1990; Bursik and Grasmick 1993). The structure of wages, and the comparative advantage of illegal wages relative to limited legal wages, also motivates such switching and short-term decision making.³²

Ecological models of foraging behavior (Stephens and Krebs 1986) offer an insightful way to analyze the tendency for youths to engage in both illegal and legal work activities, either simultaneously or by moving back and forth between them. These models apply economic opti-

³² The “doubling up” of legal work and cocaine sales in the Fagan (1994) and Reuter, MacCoun, and Murphy (1990) studies indicates that for many young men illegal work may be temporary or transitional work that supplements difficult low-wage or otherwise unsatisfactory work. For others, legal work provides options to riskier illegal work or perhaps broadens markets for sellers of illegal goods or services.

mizing analysis to the problems faced by animals that forage for food. The animal must make several decisions in a short period of time: whether it should “prey” on a particular food source it encounters or turn that prey down to search for better prey; exploit opportunities in a given patch or search for new opportunities, and so forth. The parallels with youths “foraging” for earnings, legal or illegal, are striking. The youth must decide whether to engage in robbery, take a short-term (and perhaps low-paying) job when he encounters an offer; steal in the local community or try some adjoining area; sell drugs to employees, if working, or to customers in a street market. Empirical evidence of such short-term switching and career juggling is evident in recent studies with prison inmates (Horney, Osgood, and Marshall 1995), drug sellers (Reuter, MacCoun, and Murphy 1990; Fagan 1994), career property offenders (Decker and Wright 1995; Shover 1995), and robbers (Decker and Wright 1995).

The foraging models direct attention to differing “reservation wages” of various money-making activities and their determinants. When returns fall below the reservation wage, the youth will reject an opportunity and go on to something different. Freeman (1992) showed that young men in inner-city poverty areas encounter both illegal and legal opportunities in a relevant (and short) time period: McDonald’s may be hiring this week; Jones Construction may need a laborer; robbers may need someone to fence stolen goods; an elderly woman may wander along the wrong street; a car with an expensive stereo system may be parked in an alley, etc. In a world where short-run legal and illegal earnings opportunities arrive more or less randomly, it is natural for individuals to move between them, commit crimes while working, or take a legitimate job if one happens to be available even when engaged in criminal activities. If this hypothesis is correct, and the behavior of crime-prone youths is similar to that of foraging animals as opposed to that of adults with permanent careers, the supply of youths to crime will be quite elastic, consistent with the observed failure of incapacitation to reduce crime.

C. Research on Crime, Work, and Development

In addition to basic research, research in the contexts of policy experiments and interventions can provide data to understand problems of crime and unemployment. Several topics deserve research attention.

1. *Basic Research: Illegal Wages and Illegal Markets.* There is little consistent information on the diversity of illegal labor markets and ille-

gal wages. There has been extensive research on drug selling, but drug sellers are involved in a variety of illegal income-generating activities. Research is needed that focuses on the economic lives of people active in illegal markets. Studies are needed that examine market incentives for illegal work and the economic and social dimensions of illegal work that compete with the legal labor market. Similarly, research on illegal markets is needed to explain demand for illegal work, especially the social organization of illegal work and its opportunity structures. Basic social processes including recruitment and the flow of capital also will inform knowledge about the competing economic structures of crime.

a. Models of Decision Making. A fully specified model of economic decision making will provide necessary information on the cognitive processes leading to decisions to engage in illegal work. Similar models have been developed by economists for addictions (Becker and Murphy 1988) and to specify deterrence of illegal behavior (Miller and Anderson 1986). Cognitive models of decision making also have been developed to explain involvement in violence (Dodge and Crick 1990), but these focus less on economic variables than on strategic decision making.

Perspectives from economic choice, opportunity, control, and labeling theories can be integrated in a conceptual framework of decision making about work preferences and choices. Prior work experiences should be included to measure conceptions of work and changes over time in response to experiences in the workplace. Transitions from legal to illegal and back to legal work should be closely analyzed, as should the difficult transitions from school to work and incarceration to work. Samples should include several neighborhoods to assess the mediating influences of peer networks and local economies. A range of informal and formal economic activities should be specified, and data collection points should occur with sufficient frequency to address the close timing of work and crime decisions. Age cohorts should vary as well, recognizing the varying places in the natural histories of crime and work of people at different stages in the life course.

b. Employer-Employee Relationships. Conflicts in the workplace are one barrier to employment for unskilled or semi-skilled young males at the end of the job queues. These conflicts are the source of frequent absenteeism and the discount on job quality that may influence decisions to turn to illegal work. Studies on the sources and outcomes of conflicts in the workplace for inner-city youths are needed to help fashion interventions to maintain job stability. This effort may be part

of a larger qualitative research effort to understand the work experiences of young males who are at the cusp of decisions regarding legal and illegal work. If conflicts are a source of attrition from the labor force, the origins of and solutions to these conflicts have important implications for maintaining labor force attachments.

2. *Policy Experiments.* Research in applied settings provides laboratories for testing economic theories of crime and legal and illegal work. There is the obvious intuitive appeal of jobs programs as an intervention to reduce criminality.³³ When offenders can be put to work at sufficient wages to compete with illegal income, logic suggests that they will desist from crime. Research is needed on the effects of increasing market incentives for legal work (see Fagan 1992*a*, 1994; Freeman 1992, 1994; Grogger 1994, 1995, 1998). Pay scales would have to be set to meet individual needs and to reflect market wages. The type of work and occupational status are additional considerations (Matsueda et al. 1992). Work outcomes are contingent on job quality, wages, and the status accorded to particular types of work. Placement in unskilled labor or work for work's sake may not attend to theoretically important dimensions that the illegal market sometimes fulfills. Setting also is an important dimension of work that merits additional research (Uggen, Piliavin, and Matsueda 1992). Hostile work environments confront many nonwhite males entering the workforce (see, e.g., Bourgois 1989, 1995; Kirschenman and Neckerman 1991), discounting the returns from legal work by raising social and personal costs. Disputes in the workplace between young minority males and white employers are all too common (Ferguson and Filer 1986; Sullivan 1989; Anderson 1990), adding additional downward pressures on the returns from legal work.

Age also will be an important variable in the relationship of work, wages, and crime. For younger people, especially those who have

³³ Of course, an alternative policy would focus on reducing the returns from illegal work to match wages for legal work. Current illegal work involves a diverse set of activities, but drug selling appears to be the most lucrative and widespread. Reducing the returns from drug selling would require either a decline in demand (an unlikely prospect given the past two decades of drug crises in American cities), or the deregulation of drugs and the substitution of market rules for legal controls. This has proven to be a politically unpopular option and is not feasible in the short run. Experiments with increasing punishment costs over the past decade also have not stemmed participation in violent crime but have been associated with declines in burglary rates. The connection between incarceration rates and property or drug crime rates is tenuous at best, since the bulk of those imprisoned have not been property crime offenders (Reiss and Roth 1993).

avoided legal sanctions but who face uncertain futures in the labor market, work experiences take place in the developmental context of emerging human capital and school-to-work transitions. Older individuals have different motivations, shaped by the changing conceptions of work and needs at later developmental stages. Having experienced prison, perhaps they are more willing to discount the returns from illegal work in light of higher punishment costs and (if married) higher commitment costs. Especially for those returning from prison, job placements may be more important than skill development. Yet these individuals face a scary list of obstacles: criminal labels, skill and human capital deficits, and limited access to job networks. They are no doubt at the end of the job queue for a shrinking demand for unskilled labor.

Racial preferences of employers also present an important contextual factor in measuring work outcomes. This involves both initial hiring decisions and termination decisions. Employers are quite open in their racial hiring preferences (Wilson 1996). Their biases are based on perceptions of African American males as making "trouble" through higher wage demands, poor productivity, frequent absenteeism, and conflicts with coworkers and supervisors. However, discrimination in hiring poses a formidable barrier to the development of initial job contacts and the human capital that accrues through employment. Firing decisions also may reflect racial imbalance and bias.

The supported work experiments of the 1970s provided several lessons for moving offenders from crime to legal work. The analyses of the TARP experiments suggest limited effects of supported work programs for ex-offenders but promising effects in the samples overall for offenders whose human capital "protected" them from failure (Needels 1994). Rethinking TARP to incorporate lessons from basic research suggests the possibility of further experiments that include ancillary services as well as financial support and disaggregated interventions for older versus younger offenders.

The cessation of crime with age, and the return of many offenders to legal work at the end of crime careers, suggests a final research context to understand the transition from crime to work. The processes of reintegration from illegal work (Biernacki 1986; Adler 1993) require social psychological adjustments to new roles and circumstances. Research on the natural history of desistance should focus on the economic contingencies and strategies that support that transition. This would involve micro-study of the cognitive decisions and processes beginning with cohorts of offenders returning from prison or currently

on parole or probation supervision. Measures would look closely at assessments of illegal and legal work in terms of both pecuniary and social "costs" and "payoffs," and the changes in self- and social identity that accompany the shift away from deviant networks to the more predictable "straight" world.

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