

What Kind of Joblessness Affects Crime? A National Case–Control Study of Serious Property Crime

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Published online: 11 January 2016
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Abstract

Objective To assess whether joblessness affects the commission of serious property crime.

Methods We studied serious property crime, applying a case–control design to nationally representative samples of (a) known serious property crime offenders and (b) nonoffenders. This was done by comparing a national sample of prison inmates convicted of robbery or burglary (the “cases”) with a general sample of the U.S. adult population (the “controls”). In contrast to prior individual-level research, the study sample included substantial numbers of serious offenders, and provided a formal basis for generalizing the findings to the U.S. adult population. We differentiated five labor force statuses: (1) unemployed (according to the official government definition), (2) underemployed, (3) out of the labor force for widely socially accepted reasons (OLFL), (4) out of the labor force for reasons not widely accepted (OLFN), and (5) fully employed.

Results We found that when these distinctions are made, people are not more likely to engage in burglary or robbery when they are either completely unemployed or underemployed according to the official definitions. Instead, it is being out of the labor force for reasons not widely accepted as legitimate that is significantly and positively related to serious property offending.

Conclusions The results suggest that offending among jobless persons may reflect preexisting differences in criminal propensity among those who stay out of the labor force, rather than effects of joblessness per se. Part-time work is associated with significantly less property crime, perhaps because the willingness to accept even part-time jobs serves as an indicator of commitment to pro-social attitudes.

Keywords Unemployment and crime · Labor force · Property crime

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Introduction

Past research on the effect of unemployment on crime has yielded puzzlingly mixed findings (Fagan and Freeman 1999; Kleck and Chiricos 2002). Macro-level research has often failed to find the expected positive unemployment–crime (U–C) association, though some scholars have noted that this may be because researchers usually failed to separate the opportunity-reducing effects of widespread joblessness from its crime-motivating effects on the unemployed (Kleck and Chiricos 2002). Most individual-level research on U–C has concerned only adolescents or young adults, and has generally found no criminogenic effects of joblessness. This work, however, has largely relied on self-reports of dubious validity to measure criminal behavior (and mostly minor varieties thereof), and was typically based on local convenience samples of limited generalizability, including few serious offenders. There is remarkably little individual-level research on the U–C link among adults and even less focusing on serious crime and serious offenders. Thus, there is a need for better individual-level research on the U–C connection among adults. There is, however, also a need to rethink which kinds of joblessness can affect criminal behavior.

What Kind of Joblessness Affects Crime?

In the U.S., the official Bureau of Labor Statistics (BLS) definition of unemployment is being without a job but actively seeking one. Those who have not recently actively sought work are defined as being out of the labor force. From a criminological viewpoint, a person who is unemployed according to the official definition is arguably in a more socially legitimate work status than many of those out of the labor force, since the latter implies that the person is not only without a job, but is not seeking one either. While some in the latter category may be discouraged workers who have, at least temporarily, given up actively searching for work, others do not want legitimate employment. A person who does not even plan on getting a job in the foreseeable future has even less to lose from engaging in crime than a person who lacks a job but hopes to get one. Conversely, the fact that officially unemployed persons are, by definition, actively seeking a job is a sign that they are committed to the conventional value of work, and could be worried that criminal behavior might jeopardize their chances of getting a job.

In contrast, many people are out of the labor force for reasons widely accepted as legitimate. Those who are retired, keeping house, disabled, or engaged in full-time schooling are neither employed nor seeking employment, but for reasons that are widely regarded as socially acceptable or even admirable. Thus, it is important to distinguish those who are out of the labor force for “legitimate” reasons from those out of the force for “illegitimate” reasons.

We suggest that it is important to distinguish four kinds of joblessness:

1. unemployed—jobless, but actively seeking employment,
2. underemployed—working only part-time, even though the person may want and need full-time employment,
3. out of the labor force for reasons generally considered to be socially acceptable—working in the home as a housewife, retired, disabled, or attending school full-time, and
4. out of the labor force for reasons not widely considered to be socially acceptable—jobless, but not seeking a job, and lacking the more common socially acceptable reasons for not seeking employment listed in the previous category.

Theory

Virtually every major criminological theory offers possible explanations of why being unemployed or underemployed might make criminal behavior more likely or increase an individual's rate of criminal activity, but these theories do not explicitly address the distinctions between the different kinds of joblessness that we have enunciated. We think they should do so, because some theories imply effects of some kinds of joblessness on crime but not others.

To be sure, researchers have made some kinds of distinctions among types of joblessness and employment, distinguishing persistent unemployment from temporary unemployment, stable or regular employment from unstable/intermittent employment, part-time employment from full-time employment, and employment in higher quality jobs from employment in lower quality jobs (e.g., Farnworth et al. 1994; Huiras et al. 2000; Apel et al. 2008; van der Geest et al. 2011). We are not, however, aware of any U–C studies that addressed the distinction between (1) being out of work but actively seeking a job and (2) being out of work and not actively seeking employment.

From some theoretical perspectives, there is little difference between these two work statuses, since they typically entail similar levels of economic deprivation due to the lack of wages, and similar levels of isolation from the social control influences of pro-social coworkers. For instance, some versions of general strain, institutional anomie, and rational choice theories would all predict similarly elevated levels of criminal conduct for both groups of jobless persons because they suffer similar levels of strain due to deprivation and frustration from joblessness, have similar reasons to question the promises of the American Dream, and have similar motivations to steal as a rational substitute for lawful wage-earning (Agnew 1992; Messner and Rosenfeld 2001; Cornish and Clarke 2006).

On the other hand, a more nuanced reading of general strain theory suggests that unemployed persons, who are trying to get a job but failing to do so, experience more emotional strain than persons out of the labor force who have reconciled themselves to their joblessness, since the former are more frustrated than the latter (Agnew 1992). From this standpoint, the unemployed should be more likely to turn to crime than those who are no longer seeking jobs.

Social control theory also implies different levels of criminal behavior between these two groups, but makes the opposite prediction as to which one will engage in more law-breaking. The theory generally proposes that delinquent or criminal behavior will be more common among those who lack bonds to the conventional order, including a commitment to conventional lines of action. Commitment is manifested by, among other things, long-term pursuit of a higher-status occupation (Hirschi 1969, pp. 182–184). A person who is not seeking employment at all clearly lacks commitment to this particular conventional line of action. Further, a person who does not anticipate pursuing lawful employment in the foreseeable future will not see criminal activity as jeopardizing their prospects for such employment. Consequently, this theory would predict more criminal behavior among those out of the labor force for illegitimate reasons than among the unemployed and underemployed, who by their continuing pursuit of lawful work demonstrate a commitment to conventional lines of action. The underemployed, i.e. those with only part-time work, are an especially interesting group from the standpoint of social control theory. Those in this work status clearly suffer from greater economic deprivation and associated strain than the fully employed, yet the fact that they accept such unsatisfactory work could serve as an especially strong indicator of their commitment to conventional lines of action.

Routine activities theory also seems to suggest differential involvement in crime between individuals who are unemployed but looking for work and those who are out of the labor force. For example, individuals who are out of work but not actively seeking employment may have more time for socializing with their peers, which could promote criminal activity (Ploeger 1997), particularly if those peers are also out of the labor force. To be precise, if individuals who are unemployed but looking for work are regularly and actively engaged in the conventional pursuit of legitimate employment, then they will have less time to engage in unstructured socializing, which, according to routine activities theory, might otherwise facilitate criminal opportunities. In contrast, those who have dropped out of the labor force entirely would be expected to follow a pattern of socializing that is less structured and more criminogenic.

While social control and routine activities theories would suggest different effects of the work statuses on crime, low self-control theory suggests that the U–C association is spurious. According to the theory, joblessness among criminals is merely a reflection of stable personal attributes incompatible with holding a job—impulsivity, irresponsibility, insensitivity, short-sightedness, and a tendency to pursue immediate gratification (Gottfredson and Hirschi 1990, pp. 163–165). Voluntary joblessness can serve as an outward indicator of a propensity to contravene moral norms in general, including those that dictate that healthy adults of working age without any conflicting family or educational commitments should have a job. This kind of joblessness merely serves as an indicator of a personality characterized by low self-control, which is the actual cause of offending. In contrast, a jobless or underemployed person who is nevertheless actively seeking work is displaying the signs of higher self-control. Even if they are not successful in their efforts, their desire to obtain work that requires discipline and the far-sighted pursuit of long-term benefits at the expense of short-term gratification is an indication that they possess the self-control that discourages law-breaking. Proponents of this theoretical viewpoint would therefore not predict higher criminal conduct among the officially unemployed and underemployed, and indeed, Gottfredson and Hirschi see little link between unemployment and crime (p. 164). The theory does imply, however, that there will be more crime among those who are not only jobless but are also not seeking work, without any socially approved justification, not because of a causal effect of joblessness itself, but rather because of the lower self-control that is signaled by voluntary joblessness.

It is also possible that the association between joblessness and crime is spuriously due to a factor that, unlike low self-control, varies over time. Skardhamar and Savolainen (2014) argue that maturation will both increase employment and reduce criminal behavior. One methodological difference between the two explanations is that panel studies control for time-invariant traits like low self-control, but not for time-varying traits like maturation.

The distinctions we have highlighted between types of joblessness may therefore provide a novel opportunity for testing whether the U–C association is causal, or is spurious as implied by low social control theory. If joblessness itself causes more criminal behavior (especially property crime), we should expect criminal behavior to be positively associated with *both* unemployment and being out of the labor force for illegitimate reasons, since persons in both groups are equally jobless and thus equally subject to the economic deprivation and lowered social control that supposedly mediate the causal effects of joblessness. On the other hand, if the U–C association is spurious, criminal behavior should have little or no association with unemployment, but should be strongly and positively associated with being out of the labor force for illegitimate reasons, since the latter work status is an indicator of low self-control, while the former is not.

Prior Research

Research on the link between unemployment and crime can be divided into two broad categories: (1) macro-level research assessing the link between rates of unemployment and crime rates of cities, counties, metropolitan areas, states, or nations, and (2) individual-level research assessing the link between the employment status of individual persons and their criminal behavior, typically measured either by self-report surveys or official arrest records.

Overall, macro-level research typically finds no association between unemployment rates and crime rates (Chiricos 1987; Fagan and Freeman 1999; but see a contrary view of recent macro-level research by Mustard 2010). Even so, it may be that a high unemployment rate has simultaneous effects of opposite sign on the crime rate. While high unemployment may increase crime among those who are without work, it might also reduce crime because it (1) diminishes the supply of attractive opportunities for crime and (2) increases guardianship of homes and property (Cohen and Felson 1979; Kleck and Chiricos 2002). Consequently, a null or negative association between unemployment rates and crime rates does not necessarily mean that unemployment does not increase criminal behavior among those without jobs. Furthermore, official unemployment rates measure the percent of the labor force that lack a job but have actively sought employment in the preceding 4 weeks (U.S. Bureau of Labor Statistics 2012a). As a result, criminological research using official unemployment rates overlooks the link between *labor force dropout* rates and crime rates, since those who have not recently looked for legitimate work are not defined as unemployed in the official unemployment rate. If different types of joblessness differentially influence offending, then much of the U–C link in macro-level research could be missed simply because many of those who are jobless and commit crimes are not included in the official unemployment rates.

There has been little individual-level research on the U–C relationship among adults. Instead, most individual-level U–C research has been on adolescents, and to a lesser extent, young adults (Ploeger 1997; Verbruggen et al. 2012). Studies of adolescents have generally found that employment is associated with *greater* involvement in illegal behaviors. Employment, especially for extended hours, appears to increase law-breaking among adolescents (Greenberger and Steinberg 1986; Steinberg and Dornbusch 1991; Mihalic and Elliott 1997; Ploeger 1997; Wright et al. 1997; McMorris and Uggen 2000; Staff and Uggen 2003; but see Apel et al. 2008 for a contrary view). Focusing solely on adolescents, however, is a serious limitation, given that (1) the vast majority of crimes are committed by adults age 18 or older, who accounted for 87 percent of arrests in 2010 (U.S. FBI 2012, Table 38), and (2) the vast majority of unemployed persons are adults—in 2011, 90 % of unemployed persons were age 20 or older (U.S. Bureau of Labor Statistics 2012b). Thus, research on the U–C link that is confined to adolescents may miss much of the action in the U–C relationship.

Further, there are sound theoretical reasons to expect that the effect of unemployment on crime is different among adults and juveniles. Employment may increase the criminal behavior of adolescents because it removes them from the direct supervision of their parents, and sometimes from school, both of which provide social control (Ploeger 1997). Further, the meaning and function of work differs between adults and juveniles. For an adult, having a job can mean the ability to pay the rent or mortgage, make car payments, buy groceries, get medical treatment for a sick child, and pay for other necessities. Much of an adult's identity and sense of self-worth may be wrapped up in their work (Fagan and

Freeman 1999; Wadsworth 2006). On the other hand, juveniles are more likely to have relatively low-skilled jobs with little connection to a long-term career. Having this sort of job may mean only that the youth can afford to pay for discretionary items like fashionable new clothes, taking a date to dinner and a movie, or buying alcohol or illicit drugs (Greenberger and Steinberg 1986). Thus, the loss of a job or failure to secure employment in the first place may be less economically and psychologically consequential for adolescents than for adults.

Research on the U–C link among adults is more limited. Most of the few individual-level studies of the U–C link that have been done on samples that included some adults were longitudinal studies that followed subjects from adolescence only into young adulthood (e.g., Fergusson et al. 2001, covering ages 16–21; Laub and Sampson 2003, covering ages 14–32 for all but 52 of 500 original subjects; Stouthamer-Loeber et al. 2004, covering ages 13–25; Wadsworth 2006, covering ages 15–22; van der Geest et al. 2011, covering ages 18–32). There is virtually no individual-level U–C research covering ages past young adulthood, one noteworthy exception being Uggen (2000).

If employment increases criminal behavior among adolescents but decreases it among young adults, then by extension one might reasonably expect it to have even stronger crime-decreasing effects among older adults. Supporting this expectation, Uggen (2000) found that employment had a stronger crime-reducing effect among adults age 27 and older than for younger adults. Thus, at least in the case of Uggen's (2000) study, it appears that employment may diminish the risk of criminal activity to a greater degree as adults get older. Additional research comparing older groups of adults, however, is still absent from the literature.

Methodological Problems of Individual-Level U–C Research

The Selection Problem

Individual-level U–C studies have a number of methodological problems that could distort the key findings. One of the most commonly discussed is the “selection” problem, the idea that unmeasured causes of criminal behavior also cause people to “select” themselves out of lawful employment. The unmeasured cause might, as previously noted, be low self-control, but the problem exists regardless of the validity of any particular theory of criminal behavior, since it is merely one specific variant of the general problem of omitted-variable bias. The standard response to this problem in the U–C literature has been to analyze panel data with fixed effects models in which subjects observed at different time points in effect serve as their own controls (e.g., Farrington et al. 1986; Apel et al. 2008; Staff et al. 2010; Fergusson et al. 2001; Aaltonen et al. 2013; Skardhamar and Savolainen 2014). By analyzing within-individual changes in employment and crime, the researcher controls for any time-invariant attributes of individuals that might confound the U–C association.¹ If one is willing to assume, for example, that self-control or some other personality trait is invariant over time (or at least over relatively short periods of time), then this research design effectively controls for these attributes. However, some research has suggested that self-control is not invariant over time (see Hay and Forrest 2006; Na and Paternoster 2012), which may threaten the validity of this body of research.

¹ An additional concern is that fixed effects models only use individuals that vary over time on the outcome of interest, which can lead to substantial attrition in general population samples.

The “Few Serious Offenders” Problem

An additional methodological concern is that most of the panel datasets that measure both work status and criminal behavior include few serious offenders and thus have little variation in serious criminal behavior (e.g., Farrington et al. 1986; the many studies using the National Longitudinal Survey of Youth (NLSY) such as Crutchfield and Pitchford 1997, Grogger 1998 and Apel et al. 2008; and studies using the Monitoring the Future surveys such as Staff et al. 2010). For example, in the NLSY, almost all of the variation in criminal behavior is among persons with minimal involvement in crime (see Wadsworth 2006). The same appears to be true of the samples of adolescents analyzed in the Monitoring the Future surveys (see Staff et al. 2010, pp. 1110–1111). The lack of serious offenders is even worse in general population samples of low-crime western European nations such as Finland or the Netherlands (e.g., Aaltonen et al. 2013; Ruschoff et al. 2014).

Ultimately, it appears that surveys of school or general populations that do nothing effective to over-represent serious criminals end up with samples with few serious offenders, and thus few people who can honestly report serious offenses (Thornberry and Krohn 2000). Anticipating this problem, some self-report researchers do not even ask questions about serious criminal behaviors, while others ask such questions, but obtain confessions of serious crimes among only a tiny handful of respondents (Farrington 2003). Either way, the result is that studying the causes of serious criminal offending is not feasible because there are too few serious offenders included in the samples, and too few serious offenses reported. This may be particularly important if unemployment is unlikely to have much crime-causing effect among those with little criminal propensity, as some scholars have suggested (Farrington et al. 1986).

The Causal Order Problem

Another key difficulty in studying the U–C association is that causal order could run in either or both directions. While work status might affect criminal behavior, law-breaking might affect whether one is employed (Thornberry and Christenson 1984). In particular, if criminal activity results in an official criminal record, this could make it harder to gain lawful work. A positive U–C association is therefore not necessarily indicative of a criminogenic effect of joblessness. Many studies, notwithstanding their longitudinal character, do not establish the sequence of job acquisition or loss and changes in criminal activity within the 1- or 2-year segments of time typically covered in each wave. The importance of this issue was demonstrated in an important study by Skardhamar and Savolainen (2014), who analyzed monthly arrest data of a national sample of Norwegian recidivist adult males and found the expected positive U–C association, but also found that desistance from crime *preceded* getting a job, and that (for all but two percent of the sample) “becoming employed was not associated with further reductions in criminal behavior” (p. 263). The authors interpreted their findings as reflecting maturation, a time-varying attribute that increased the likelihood of both desistance from crime and gaining employment, and concluded that “transition to employment is best viewed as a consequence rather than a cause of criminal desistance” (p. 263).

The Self-Reported Crime Problem

An additional methodological limitation is that many individual-level studies rely on self-reports to measure criminal behavior (e.g., Crutchfield and Pitchford 1997; Wadsworth 2006). Although content and construct validity of self-report measures of illegal behaviors is often found to be acceptable (Thornberry and Krohn 2000), direct tests of *criterion* validity are scarcer and often unconvincing, and those tests that are more convincing suggest that there is “a substantial degree of either concealing or forgetting past criminal behavior.” (Thornberry and Krohn 2000, p. 58). Underreporting in self-report surveys, moreover, appears to be patterned in ways related to respondents’ motives for concealing (Tourangeau and Yan 2007, pp. 850, 876), i.e. is not random (Clark and Tiffit 1966; Harrison 1995). Such intentional misreporting of criminal acts can artificially increase the U–C association because *the willingness of respondents (Rs) to admit to criminal acts may be related to employment itself*. An employed person has more to lose if it becomes known to their employer that they engage in crime, and some Rs may fear that their confessions to researchers could somehow become known to persons other than the researchers, notwithstanding assurances of confidentiality. If employed persons consequently conceal more of their criminal acts than unemployed persons, it would give artificial support to the hypothesis that employment reduces criminal behavior (Farrington et al. 1986).

Although some recent studies have used arrests and convictions to measure criminal behavior (Van der Geest et al. 2011; Verbruggen et al. 2012; Aaltonen et al. 2013; Skardhamar and Savolainen 2014), these measures may be afflicted by different problems that produce similar biasing effects. Police likely devote more effort to monitoring the behavior of people in areas with higher unemployment, and prosecutors and judges may be more likely to convict jobless persons if they expect them to be at greater risk of recidivating than employed persons. If such patterns are widespread, they may also lead to an overstatement of the U–C link.

The Generalizability Problem

Finally, the modest body of individual-level U–C research on adults is mostly based on local samples (Laub and Sampson 2003—Boston residents; Stouthamer-Loeber et al. 2004—Pittsburgh youth; Pulkkinen et al. 2009—residents of a single metro area in Finland), inmates released from one particular institution (Van der Geest et al. 2011), or persons who participated in a particular job training program (Uggen 2000—nine local samples), limiting the formal basis for generalizing results to any larger population (see Aaltonen et al. 2011 for a rare exception).

The Current Study

To summarize, there is a need for individual-level research on the U–C link that (1) differentiates the full range of work statuses, including being out of the labor force, (2) focuses on adults, (3) does not rely on self-reports to measure criminal behavior, (4) uses a sample that includes substantial numbers of serious offenders, and (5) is based on a probability sample of the national adult population, providing a formal basis for generalizing the findings to the U.S. adult population.

The aims of the current study are to explore four questions about serious property offending among adults:

- (1) Does joblessness itself increase offending, or is the U–C association merely reflective of individual attributes that increase both joblessness and criminal behavior? If the former, what kind of joblessness increases offending?
- (2) Does part-time work (underemployment) merely have effects on crime that are intermediate between those of full-time employment and unemployment? Or does part-time employment, despite its greater economic deprivation compared to full-time work, serve as an especially strong indicator of commitment to conventional lines of action, which reduces crime?
- (3) Does work status have more effect on the criminal behavior of older adults than on that of younger adults?
- (4) Is the U–C association attributable to an effect of criminal activity on employment rather than the reverse? In particular, could it be entirely the result of the detrimental effects of an official criminal record on the chances of getting a job?

Methods

We addressed these issues with a case–control design using nationally representative samples of the U.S. adult population. A case–control design is a nonexperimental individual-level cross-sectional design that compares persons with an attribute of interest such as criminal behavior (called “cases”) with persons lacking this attribute (called “controls”). The design is especially well suited to studying a rare phenomenon like serious criminal behavior, since it effectively oversamples for persons displaying the rare trait (Schlesselman 1982). In this study we accomplished this by combining two independently gathered samples, one a large national probability sample of serious criminals and the other a large national probability sample of the general adult population.

Our sample of criminal “cases” was taken from the Survey of Inmates in State and Federal Correctional Facilities (SISFCF) 2004, an in-prison survey of a national probability sample of prison inmates, who were interviewed between October 2003 and May 2004 by employees of the U.S. Bureau of the Census (U. S. Department of Justice 2007). We used two subsets of this sample—(1) inmates in state prisons who had been convicted of robbery (regardless of what other offenses they might have been convicted of), and (2) inmates in state prisons who had been convicted of burglary (regardless of what other offenses they might have been convicted of). We focused on property crime because prior research has found that property crime is the type that is most likely to be affected by unemployment (Aaltonen, MacDonald, Martikainen, and Kivivuori 2013, pp. 579, 581; see also Farrington et al. 1986). We therefore were deliberately giving the hypothesis that unemployment affects crime its strongest chance for support. We focused specifically on robbery and burglary because these are the most serious of the property crimes for which criminals are commonly imprisoned. Further, by limiting analysis to more serious, and therefore rarer, crimes, it became more plausible to assume that persons in the GSS control sample had *not* committed such offenses. Each of the sets of inmates convicted of robbery or burglary was used as a sample of “cases” in one of two case–control analyses, a robbery analysis and a burglary analysis.

The noncriminal “control” sample of adults who were assumed to have *not* committed a burglary or robbery was drawn from the General Social Surveys (GSS) conducted in 2000 and 2002 (Smith et al. 2011). The GSS are based on home interviews with a nationally representative sample of noninstitutionalized U.S. adults, age 18 or over. To ensure comparability with members of these adult control samples, we likewise confined the inmate samples to those age 18 or over. Further, to ensure that the time periods to which employment status pertains were comparable, the inmate samples were confined to persons who had been incarcerated as a result of arrests that occurred sometime in the period 2000 through 2002, so that work status pertained to 2000–2002 in both the case sample and the control sample.

We assumed that persons in the GSS sample have not committed a robbery or burglary, an assumption that is probably wrong in at least a few cases. We nevertheless regard this as a sufficiently accurate assumption, based on the fact that, in absolute terms, robbery and burglary are quite rare.² Regarding the offender “cases,” involvement in robbery or burglary was established by the fact that an inmate was arrested, convicted, and sentenced to prison for these crimes by a court of law, rather than by relying on the person to confess to the crime to a survey researcher. Notwithstanding the undoubted existence of instances of false imprisonment, there is sound reason to believe that status as a robber or burglar has been established with a high degree of accuracy for the inmates.

Both the case and control samples were representative of their respective national adult populations as they were in 2000–2002—the “cases” were representative of the national population of imprisoned adult robbers and burglars, and the “controls” were representative of the adult noninstitutionalized U.S. population (see discussion of the Census Bureau’s inmate sampling procedures in U.S. Department of Justice, Bureau of Justice Statistics. 2007, and the GSS sampling procedures in National Opinion Research Center 2014). When combined, the two samples are representative of the U.S. national population of noninstitutionalized adults and imprisoned burglars and robbers. Findings from analysis of this sample can therefore be generalized to this U.S. population.

In a case–control study, the dependent variable is the person’s membership in either the case group or the control group. In our robbery analysis, the dependent variable measures whether the subject is an imprisoned robber (Robber = 1) or a member of the general

² Using the highest evidence-based estimates (from the National Crime Victimization Survey), there were 688,310 personal robbery incidents in 2000 (U. S. Bureau of Justice Statistics 2014). This does not count commercial robberies, but we can roughly estimate total robberies using FBI data that indicate that the ratio of total robberies (including commercial robberies) over personal robberies was 1.3384 in 2000 (U.S. Federal Bureau of Investigation 2014). Thus, the estimated total robberies in 2000 was $1.3384 \times 688,310 = 921,239$. Arrest data indicate that 74.712 % of robberies in 2000 were committed by persons age 18 or over (U.S. Federal Bureau of Investigation 2014), so an estimated $0.74712 \times 921,239 = 688,280$ robberies (whether reported to the police or not) were committed by adults in the U.S. in 2000. Even if we implausibly assumed that there was no repeat robbery behavior, thereby spreading robbery behavior across the widest share of the population, no more than 688,280 U.S. adults could have committed a robbery in 2000—just 0.00329 of the adult population of 209,128,000. Even over a 10-year period, if this prevalence were to persist, and the probability of robbing was independent across years, the maximum fraction of the adult population that committed a robbery would be just $1 - (1 - 0.00329)^{10} = .032$. Even if robbers were as likely as others to respond to surveys (another generous but unlikely assumption), this means that at most 3.2 % of GSS respondents could have committed a robbery in the preceding 10 years, and thus that our assumption that none were robbers would be correct 97 % of the time. Since repeat robbery is in fact quite common and the prevalence of robbery behavior is therefore likely to be considerably lower than 3.2 %, and since robbers are probably not as likely as other adults to cooperate with surveyors, we suspect that the accuracy of our assumption that none of the GSS Rs are robbers is likely to be closer to 99 %.

noninstitutionalized U.S. adults population (Robber = 0). In the burglary analysis, the dependent variable measures whether the subject is an imprisoned burglar (Burglar = 1) or a member of the general noninstitutionalized U.S. adult population (Burglar = 0).

This case–control design ensures that there are substantial numbers of serious property offenders, providing the statistical power needed to reliably establish how robbers and burglars differ from relatively law-abiding persons—in particular, how they differ with regard to their employment status. Our samples included 476 unweighted cases of robbers, 325 unweighted cases of burglars, and 5582 members of the general U.S. adult population. The design, therefore, could be thought of as a way of greatly overrepresenting burglars and robbers in the study sample, thereby providing enough variation on the robbery and burglary variables for meaningful analysis.

The primary independent variables of interest were the variables measuring employment status. We differentiated five labor force statuses: (1) unemployed (according to the official Bureau of Labor Statistics definition), (2) underemployed (working, but not full-time), (3) out of the labor force for legitimate, widely socially accepted reasons (OLFL), (4) out of the labor force for reasons not widely accepted (OLFN), and (5) fully employed (the omitted category).

For inmates, the SISFCF measured the employment status of an inmate during the month prior to arrest for the offense(s) that led to his incarceration, and whether employment was full- or part-time. For general population controls, the GSS establishes full- or part-time employment at the time of the interview. In both surveys, the distinction between full- and part-time employment was self-defined by the respondent. In the SISFCF, inmates who reported working in the month before their arrest were asked “Was this full-time, part-time, or occasional work?” (U.S. Department of Justice 2007, p. 584). Since “occasional work” might have meant as little as an hour or two of work in the reference month, and inmates choosing this category had necessarily rejected the “part-time” choice, we treated “occasional work” as closer to unemployment than to part-time work. Full details of our coding of work status in the two datasets are reported in the “Appendix”.

To reduce the probability that a U–C association was spurious, or due to selection effects, we controlled for all potentially confounding variables that were common to both the SISFCF and GSS datasets: sex, race (Black), Hispanic or “other” ethnicity, age, marital status, whether the subject had any children under age 18, personal gun ownership, and education (highest grade completed). The data were analyzed using logistic regression, due to the binary nature of the burglar and robber dependent variables. The SISFCF cases were weighted by the FINALWT variable, and the GSS controls were weighted by the WTSSALL variable, to adjust for differing probabilities of selection. To address the problem of missing data, we analyzed data using both (1) the common listwise deletion procedure, which eliminates all cases missing on any of the variables to be analyzed, reduces sample size, and may introduce sample bias, and (2) the STATA ice multiple imputation procedure. The goodness of fit statistics reported are derived from logistic regression models based on data obtained using listwise deletion methods. These statistics are not provided by STATA when conducting the ice multiple imputation procedure, since this procedure only provides pooled estimates that are derived from numerous, uniquely imputed models, each with their own fit statistics. Nevertheless, although they do not correspond perfectly to the multiply imputed data, our goodness of fit statistics (pseudo R^2 s) provide a reasonable estimate of how well the models predict robber or burglar status, considering that our listwise deletion and MI parameter estimates were very similar.

Table 1 Descriptive statistics of GSS, burglars, and robbers

Variable	Description	GSS		Burglars		Robbers				
		Mean	Standard Deviation	# Missing	Mean	Standard Deviation	# Missing			
Employed	Subject is employed (full-time)	.53	.007	0	.60	.028	0	.52	.024	1
Underemployed	Subject is underemployed (part-time)	.14	.005	0	.09	.016	0	.15	.017	1
Unemployed	Subject is unemployed, looking for work	.03	.003	0	.14	.020	0	.15	.017	1
OLFN	Subject has dropped out of the labor force without a known, legitimate reason.	.02	.002	0	.14	.020	0	.15	.017	0
OLFL	Subject is not participating in the labor force due to a known, legitimate reason	.27	.006	0	.02	.007	0	.02	.006	0
Age	Exact age of subject in year (subjects under 18 excluded)	44.89	.244	22	31.81	.542	0	28.09	.401	0
Male	Subject is Male	.46	.007	0	.96	.006	0	.96	.006	0
Black	Subject is African American	.14	.005	0	.38	.028	0	.54	.024	0
White	Subject is Caucasian	.79	.006	0	.42	.029	0	.21	.019	0
Hispanic/Other	Subject is Hispanic, Asian, Pacific Islander, or Native American	.07	.004	0	.20	.023	0	.26	.021	0
Married	Subject is married	.54	.007	1	.14	.020	0	.10	.015	0
Children	Subject has at least one child	.71	.007	21	.51	.030	63	.48	.026	79
Own Gun	Subject personally owns a gun	.18	.006	36	.27	.028	48	.25	.024	184
Education	Highest grade completed (up to two years of graduate school)	13.23	.040	21	10.87	.126	2	10.52	.101	2

Table 2 Reasons for being out of the work force (jobless and not seeking employment)

	GSS		Burglars		Robbers		Both groups	
	f	%	f	%	f	%	f	%
Retired	818	47.6	0	0	0	0	0	0
In school	158	9.2	3	4.3	7	6.7	7	6.7
Keeping house	593	34.5	4	5.8	4	3.8	4	3.8
None of the above 3	149	8.7	62	89.9	94	89.5	94	89.5
Total	1718	100	69	100	105	100	105	100

	Burglars		Robbers		Both groups	
	f	%	f	%	f	%
<i>Other reasons among inmates (besides the 3 above) for not looking for work:</i>						
No suitable work available	2	3.2	5	5.3	7	4.5
Couldn't find any work	2	3.2	3	3.2	5	3.2
Lack of necessary schooling, training, skills or experience	1	1.6	2	2.1	3	1.9
Medical condition, ill health, physical or mental disability	9	14.5	12	12.8	21	13.5
Employers thought too young or too old	0	0.0	0	0.0	0	0.0
Criminal record was a handicap	3	4.8	1	1.1	4	2.6
On welfare or other public assistance	0	0.0	0	0.0	0	0.0
Didn't need job	4	6.5	6	6.4	10	6.4
Didn't want job	13	21.0	17	18.1	30	19.2
Illegal activities	11	17.7	20	21.3	31	19.9
On drugs/alcohol	10	16.1	12	12.8	22	14.1
Other reason	7	11.3	13	13.8	20	12.8
No specific reason	0	0.0	3	3.2	3	1.9
Total	62	100.0	94	100.0	156	100.0

Results

We performed separate analyses of robbery and burglary, and for each offense, estimated models using either multiple imputation methods or listwise deletion to address missing data problems. The estimates were all based on weighted data. Table 1 lists and describes the variables and reports their means and standard deviations separately for the GSS controls, burglars, and robbers, as well as showing the number of cases missing data on each variable.

Of primary interest, unemployment was five times more common among burglars and robbers than among nonoffenders. There are, however, numerous other differences between offender and nonoffenders groups besides employment status, so one cannot infer an effect of employment status on offending solely on the basis of these bivariate associations. As expected, the offender groups are more likely to be young, male, Black, Hispanic, unmarried, childless, gun-owning, and less educated than the nonoffender controls.

The inmate survey provides unusually rich information about the work statuses of offenders prior to their arrests for the offenses that got them imprisoned. The data (shown in Table 2) allow us to explore in some detail the differences in reasons for being out of the labor force between serious property offenders and nonoffenders. Nearly everyone in the GSS sample of nonoffenders who was neither employed nor seeking employment fell into three “legitimate” categories of reasons for not seeking work: they were retired, in school, or keeping house. In contrast, less than a tenth of the offenders had such reasons. The SISFCF differed from the GSS mainly in that the former gathered considerably more detailed information about reasons for not seeking employment. Both the SISFCF and the GSS allowed Rs to report being retired, in school, or keeping house (“stay at home parent/family responsibilities” in the former) as reasons, but the SISFCF delved into numerous other reasons as well.

A few inmates (7.7 %) characterized themselves as discouraged workers, stating that they could not find any work or that there was no suitable work available. Also, some of the inmates who did not look for work stated that various disabilities prevented them from working, including medical conditions (13.5 %) and being “on drugs/alcohol” (14.1 %). Health problems are more common in the inmate population, and provide a more legitimate explanation why some failed to seek lawful employment prior to their incarceration, while substance abuse problems might or might not be considered legitimate reasons, depending on how voluntary one perceived the drug use to be.

On the other hand, a surprisingly large share of inmates forthrightly admitted to “illegitimate” reasons for not looking for work. Half of the inmates not seeking employment indicated that they were not looking for work because they did not want a job, did not need one, were engaged in illegal activities, or had “no specific reason” for not seeking a job, while another 14 % said that being “on drugs/alcohol” was the reason they had not looked for work. Thus, inmates were far more likely than general population adults to have been out of the labor force for reasons not likely to be considered morally acceptable by most Americans.

Research Question 1

Table 3 displays estimates of the parameters for the multivariate burglary and robbery models. The first column of estimates, of the burglary model, indicate that it is persons who

Table 3 Effect of work status on burglar and robber status

	Burglar	Robber
Unemployed (unemployed = 1)	.37 (1.45) 1.44	.15 (1.16) .62
Underemployed (part-time = 1)	-.56* (.57) -2.20	-.17 (.84) -.82
OLFN ^a	1.52** (4.55) 5.82	1.66** (5.25) 5.76
The numbers in the top line of each row represent the logistic regression coefficients and the odds ratio (in parentheses). The number in the bottom line of each row represents the ratio of the coefficient over its standard error. Multiple imputation was used to handle missing data. Models using list wise deletion yielded results that were substantively the same. The only exception was that the coefficient for “Unemployed” became significantly different from zero ($p < .05$) in the burglary model. Reference category is fully employed	OLFL ^a -2.46** (.09) -5.37	-2.28** (.10) -6.91
	Age -.05** (.95) -7.04	-.08** (.92) -10.21
	Male 3.23** (25.29) 15.96	2.97** (19.49) 16.47
	Black ^b 1.65** (5.19) 9.08	2.60** (13.53) 14.26
	Hispanic/other ^b 1.33** (3.77) 6.10	2.23** (9.33) 9.98
	Married -1.50** (.22) -7.02	-1.41** (.24) -6.43
	Children .01 (1.01) .08	.02 (1.02) .13
	Own Gun .76** (2.14) 4.06	.83** (2.53) 4.15
* $p < .05$, ** $p < .01$	Education -.31** (.73) -9.82	-.37** (.68) -11.79
^a OLFN: out of the labor force for reasons not widely accepted. OLFL: out of the labor force for widely socially accepted reasons	Constant .20	1.56
^b Reference category is white	Pseudo R ² .44	.45
	N 5907	6058

are illegitimately out of the labor force (OLFN) who are most likely to commit burglary, not those who are unemployed. Unemployed persons are not significantly more likely to commit burglary than employed persons. Further, those who are out of the labor force for legitimate reasons (mostly retired people, college students, and housewives) are significantly *less* likely than employed persons to commit burglary, even controlling for age and sex. The second column of Table 3 displays the estimates for the robbery model. The results are similar to those for burglary—persons out of the labor force for illegitimate reasons are significantly more likely to commit robbery, while officially unemployed persons are no more likely to rob than fully employed persons.³

Research Question 2

The results displayed in Table 3 also indicate that subjects who are underemployed, i.e. working only part-time, are significantly *less* likely to do burglary than fully employed persons, even though the former are more economically deprived, on average, than the latter. One possible interpretation derived from social control theory is that a willingness to take whatever employment one can get, even if it does not provide as many hours as the

³ For both crime types, the results were qualitatively identical when listwise deletion of cases with missing data was used, rather than using multiple imputation.

jobseeker needs, is an especially strong indicator of a commitment to conventional lines of action. On the other hand, the table also indicates that underemployed people are not significantly less likely to commit *robbery* than those fully employed. Thus, it appears that unemployed and full employed persons are similarly at risk of engaging in robbery.

Research Question 3

Since prior research has found that there are sharp differences in the estimated effects of unemployment on criminal behavior between adolescents and adults, it is reasonable to expect possible differences between younger and older adults. Therefore, the sample was divided up into two age groups (18–29 vs. 30 or older) and the analyses of Table 3 were repeated within each age-defined subsample. The resulting estimates are shown in Table 4. They indicate that the estimated effects of official unemployment, underemployment, and being legitimately out of the labor force on the odds of committing a robbery or a burglary are similar between younger adults and older adults. On the other hand, the effects of being illegitimately out of the labor force are much stronger for younger adults than for older adults, for both burglary and robbery. The odds ratio for OLFN in the burglary model is more than four times higher among young adults than among older adults. In the case of robbery, the odds ratio is more than three times higher among young adults than among older adults.

Research Question 4

We also tested the possibility that crime-committing could affect employment due to the detrimental effects of an official record on the prospects for getting a job. We did this by carrying out analyses in which the offenders were confined to those having no official record prior to the offense for which they were incarcerated. For these offenders, it was impossible for offending to have affected employment via the detrimental effects of an official record. Then, we compared the U–C association among those without an official record with the association among those with a record. We defined “official record” three ways: as a prior arrest record, as a prior conviction record, or as a prior record of incarceration in jail or prison. All inmates who had previously either been incarcerated or had been on probation were assumed to have been convicted, and all others were assumed to have had no criminal convictions prior to the offense for which they were imprisoned.

The results of these analyses are shown in Table 5. The top panel displays estimates for the burglary analyses, and the bottom panel displays results for the robbery analyses. The full models shown in Table 3 were estimated, but only the estimates for the work status variables are shown. For each offense type, we made three comparisons regarding whether or not a subject had a criminal record, differing with regard to the type of official record.

The findings indicate that even when the samples included no inmates who had possessed an official criminal record prior to their current offense, being out of the labor force for illegitimate reasons was still positively and significantly related to both burglary and robbery behavior, regardless of which kind of criminal record was used. This suggests that the associations we observed could not be due to the influence of offending on employment status via the stigmatizing effects of an official criminal record. Furthermore, official unemployment and underemployment showed no significant effect on either burglary or robbery behavior, in either subsamples including only inmates with an official record or in those in which only inmates without a record were included. The only exception to this generalization was that when only inmates lacking an arrest record were included in the analysis, unemployed persons were more likely to commit burglary.

Table 4 Effect of work status on burglar and robber status by age group

Age	Burglar		Robber	
	18–29	30 and Up	18–29	30 and Up
Unemployed (unemployed = 1)	.45 (1.57) 1.12	.45 (1.57) 1.30	-.18 (.84) -.55	.63 (1.88) 1.74
Underemployed (part-time = 1)	-.50 (.61) -1.29	-.11 (.89) -.31	-.12 (.89) -.40	.14 (1.15) .45
OLFNa	2.76** (15.88) 3.67	1.34** (3.86) 4.03	2.53** (12.50) 4.67	1.41** (4.12) 3.45
OLFLa	-1.95** (.14) -3.42	-2.12** (.12) -2.78	-1.98** (.14) -4.81	-3.30** (.04) -4.31
Age	-.03 (.97) -.50	-.08** (.92) -6.50	-.05 (.96) -1.13	-.10** (.91) -7.44
Male	3.26** (26.11) 9.45	3.26** (26.15) 12.19	2.98** (19.65) 11.43	3.05** (21.20) 11.15
Blackb	1.01** (2.74) 3.03	1.91** (6.76) 8.47	2.92** (18.53) 10.53	2.25** (9.54) 8.99
Hispanic/otherb	1.24** (3.47) 3.85	1.41** (4.11) 4.56	2.33** (10.26) 7.50	2.07** (7.94) 6.20
Married	-.50 (.61) -1.26	-2.03** (.13) -7.98	-1.39** (.25) -3.47	-1.56** (.21) -6.12
Children	.11 (1.12) .33	-.25 (.78) -1.10	.15 (1.15) .53	-.05 (.95) -.17
Own Gun	.57 (1.77) 1.88	.86** (2.37) 3.48	.59* (1.81) 1.98	1.25** (3.49) 3.91
Education	-.56** (.57) -7.95	-.24** (.79) -6.48	-.59** (.55) -8.76	-.29** (.75) -8.07
Constant	2.12	.64	2.96	1.41
Pseudo R ²	.39	.55	.51	.50
N	1204	4703	1370	4688

The numbers in the top line of each row represent the logistic regression coefficients and the odds ratio (in parentheses). The number in the bottom line of each row represents the ratio of the coefficient over its standard error. Multiple imputation was used to handle missing data. Models using listwise deletion yielded results that were substantively the same. The only exception was that the coefficient for “Unemployed” was significantly different from zero ($p < .05$) in the burglary model

Reference category is fully employed

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

^a OLFN: out of the labor force for reasons not widely accepted. OLFL: out of the labor force for widely socially accepted reasons

^b Reference category is white

Discussion and Conclusion

The findings of the current study suggest that adults who are out of the labor force for reasons not widely considered to be legitimate or socially acceptable are significantly more likely to engage in serious property crime than employed adults, but that those who are unemployed as it is officially defined are no more likely to commit serious property crimes than employed people. This is somewhat surprising, since unemployed people and those who are out of the labor force for illegitimate reasons are equally lacking in lawful

Table 5 Does the impact of a criminal record on work status account for the U–C association?

		Burglary					
		Arrest record		Conviction record		Incarceration record	
		Yes	No	Yes	No	Yes	No
Unemployed		.30 (1.35)	1.43** (4.19)	.36 (1.43)	.48 (1.62)	.21 (1.23)	.62 (1.86)
		1.09	2.60	1.33	1.11	.70	1.82
Underemployed		-.88** (.41)	.59 (1.80)	-.77** (.46)	.06 (1.06)	-.77* (.46)	-.30 (.74)
		-2.90	1.25	-2.46	.17	-2.21	-.91
OLFNa		1.43** (4.17)	2.39** (10.86)	1.61** (4.99)	1.19* (3.30)	1.41** (4.10)	1.73** (5.63)
		4.99	3.62	5.83	2.07	4.55	4.58
OLFL ^a		-2.48** (.08)	-1.36 (.26)	-2.42** (.09)	-2.35* (.09)	-2.47** (.08)	-2.35** (.09)
		-4.77	-1.33	-4.69	-2.36	-3.80	-3.75
Pseudo R ²		.45	.36	.44	.32	.40	.42
		Robbery					
		Arrest record		Conviction record		Incarceration record	
		Yes	No	Yes	No	Yes	No
Unemployed		.17 (1.18)	.36 (1.44)	.12 (1.13)	.33 (1.39)	.31 (1.37)	.12 (1.13)
		.64	.86	.45	.96	1.07	.42
Underemployed		-.25 (.78)	.18 (1.20)	-.24 (.78)	.06 (1.07)	-.10 (.90)	-.11 (.90)
		-1.02	.49	-.97	.21	-.37	-.41
OLFNa		1.58** (4.86)	1.83** (6.25)	1.78** (5.95)	1.64** (5.17)	1.79** (5.97)	1.64** (5.15)
		5.07	3.98	5.71	4.57	5.20	5.09
OLFL ^a		-2.54** (.08)	-1.36* (.26)	-2.58** (.08)	-1.73** (.18)	-2.77** (.06)	-1.96** (.14)
		-6.25	-2.42	-5.75	-3.52	-4.47	-4.96

Table 5 continued

Robbery						
	Arrest record		Conviction record		Incarceration record	
	Yes	No	Yes	No	Yes	No
Pseudo R ²	.53	.50	.53	.50	.50	.54

All controls from previous models were included, but associated estimates are omitted to conserve space. The numbers in the top line of each row represent the logistic regression coefficients and the odds ratio (in parentheses). The number in the bottom line of each row represents the ratio of the coefficient over its standard error. Multiple imputation of missing values was used

Reference category is fully employed

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

^a OLFN: out of the labor force for reasons not widely accepted. OLF: out of the labor force for legitimate, widely socially accepted reasons

employment and equally subject to the economic deprivation produced by the absence of legal income.

General strain, institutional anomie, and rational choice theories do not appear to explain these results, as all would predict similarly elevated levels of criminal conduct for jobless individuals, regardless of whether they (a) were looking for work or (b) had dropped out of the labor force for illegitimate reasons. One exception might be in the case of financial strain, since individuals who are officially unemployed may be eligible for benefits that those who are out of the labor force for illegitimate reasons may not qualify for (see Verbruggen et al. 2015). Notwithstanding this possibility, there is likely something other than joblessness itself that increases the risk of serious property offending. For instance, it may be that these individuals lack key social control mechanisms, such as a commitment to the conventional order, as they do not seek employment and appear to have no legitimate reason for their course of action. If such is the case, then social control theory might provide an adequate explanation of the findings. Another possible explanation of the results, derived from routine activities theory, is that people who are not actively seeking jobs have more time for socializing with their peers, which could in turn encourage criminal activity (Ploeger 1997). Of course, whether this could explain the difference between unemployment and being out of the labor force would depend heavily on whether unemployed people spend so much time searching for work that it significantly cuts into the time remaining for socializing with peers.

Even so, our findings are also consistent with a selection effect—people out of the labor force for illegitimate reasons may have a higher criminal propensity (e.g., low self-control), which may lead them to select themselves out of participation in the legitimate labor market. Regardless of the theoretical mechanism, our results clearly support the null hypothesis that *joblessness itself* does not increase serious property offending.

Additionally, we found that part-time employment, rather than having effects on crime that are intermediate between those of full-time employment and unemployment, is associated with a significantly *lower* probability of committing burglary than among fully employed adults. We suggest that, in some cases, part-time employment may serve as an especially strong indicator of the person's commitment to pro-social attitudes. Furthermore, we found that, in general, work status does not appear to have a significantly stronger effect on the property offending of older adults than it does on the offending of younger adults. Nevertheless, being out of the labor force for illegitimate reasons has a stronger effect on robbery and burglary among younger adults. One possible explanation for this finding is that even conventional, older adults may be more likely to not want or need a job (e.g., retirement), which may make the "illegitimate status" less criminogenic among some individuals in their age group. Finally, the results also demonstrate that the association between crime and being out of the labor force was not solely attributable to the employment-impairing effects of an official criminal record.

Our findings are subject to some of the same limitations as previous U–C research. First, although we controlled for all possible confounders common to both the SISFCF and GSS dataset, other possible confounders such as levels of self-control were not controlled. Therefore, any associations that we might have found between offending and work status could have been at least partly attributable to the effects of low self-control on both unemployment and offending. This problem, however, does not threaten our main conclusions, which support the null hypothesis of no effect of joblessness. Low self-control would presumably have positive effects on both criminal behavior and unemployment, biasing the U–C association in a positive direction. Our conclusions about unemployment and being out of the labor force for legitimate reasons was that they do not increase serious

property offending. Therefore, controlling for low self-control or similar sources of selection effects would only strengthen these conclusions. On the other hand, much of the association we found between serious property offending and being out of the labor force for illegitimate reasons could well be attributable to selection effects.

Second, our data were cross-sectional. As a result, it is difficult to determine the extent to which some subjects quit looking for a job after repeated attempts to secure one but failing to do so. In short, looking for work is, in reality, a dynamic process, in which subjects' lack of qualifications or a low availability of work may have led them to give up on searching for work at a previous time, resulting in them being classified as out of the labor force with no legitimate reason. Such a process could not be captured in a cross-sectional study.

Additionally, it is possible that offending behavior may make it less likely a person will seek lawful employment in the first place. Although we showed that acquisition of an official criminal record did not account for the associations we found between work status and crime (Table 5), it remains possible that doing crime affects work status in other ways. It should, however, be once again stressed that it is unlikely that this flaw threatens our main conclusions, in favor of the null hypothesis. If there is an effect of crime-committing on unemployment, it would presumably be a positive effect, biasing U–C associations in a positive direction. Therefore, correcting this flaw and eliminating its positive biasing effect, would likely *strengthen* our conclusions that unemployment and underemployment do not increase serious property crime offending. On the other hand, our finding of a positive effect of being out of the labor force for illegitimate reasons could be threatened by this flaw, since criminal activity might reinforce an unwillingness to seek work. If there is this sort of reciprocal causation between work and crime, the use of longitudinal data in future work would be helpful in distinguishing effects in one causal direction from effects in the other direction.

Ultimately, our findings suggest that the link between unemployment and crime is more complex than previously assumed. Future research should attend to the various ways in which unemployment is conceptualized, and the role that joblessness (rather than official unemployment), and the reasons for it, may play in predicting a criminal trajectory. Furthermore, efforts should be made to more adequately examine the ways in which being out of the labor force for illegitimate reasons is connected with a general propensity towards crime, and the implications of such a connection for this body of literature.

Appendix: Coding of Work Status in GSS and SISFCF Datasets (Using SPSS Commands)

In both datasets, there are four work status categories into which each respondent is classified, and the fourth, NILF, is divided into two subtypes, OLF and OLFN. A dummy variable (1/0) is created for each of these statuses, and 9 is the missing-data designator for all the variables.

1. Employed full-time, 35 or more hours—EMPLOYED (reference/omitted category)
2. Employed part-time (under 35 h, if number of hours known)—UNDEREMP
3. Unemployed (no job, part- or full-time, looking for job)—UNEMPLOY
4. Out of labor force (no job and not looking for job)—NILF
5. Out of labor force for a known socially accepted reason—OLFL

6. Out of labor force for no known socially accepted reason, or known reason that is not widely socially accepted—OLFN

Rs were considered to be out of the labor force for a socially accepted reason (OLFL) if they (1) had no job, full- or part-time, (2) were not looking for work, but (3) had a reason for not seeking work that would be widely regarded as socially acceptable—they were students, keeping house, or were retired. These Rs were be coded 1 on OLFL and 0 on OLFN. Rs who were NILF and who had no such reason for not seeking work were coded 0 on OLFL and 1 on OLFN.

General Social Survey (GSS) Controls

```

COMPUTE EMPLOYED=0.
IF (WRKSTAT EQ 1 & HRS1 GE 35 | (WRKSTAT EQ 2 & HRS1 GE 35) |
(WRKSTAT EQ 3
& HRS2 GE 35)EMPLOYED=1.
IF (WRKSTAT EQ 9)EMPLOYED=9.
COMPUTE UNDEREMP=0.
IF ((WRKSTAT EQ 2 & HRS1 LT 35) | (WRKSTAT EQ 1 & HRS1 LT 35) |
(WRKSTAT EQ
3 & HRS2 LT 35))UNDEREMP=1.
IF (WRKSTAT EQ 9)UNDEREMP=9.
COMPUTE UNEMPLOY=0.
IF (WRKSTAT EQ 4)UNEMPLOY=1.
IF (WRKSTAT EQ 9)UNEMPLOY=9.
COMPUTE NILF=0.
IF (WRKSTAT GE 5 AND WRKSTAT LE 8)NILF=1.
IF (WRKSTAT EQ 9)NILF=9.
COMPUTE OLFL=0.
IF (NILF EQ 1 & (WRKSTAT EQ 5 | WRKSTAT EQ 6 | WRKSTAT EQ 7))OLFL=1.
IF (WRKSTAT EQ 9)OLFL=9.
COMUTE OLFN=0.
IF (NILF EQ 1 & OLFL EQ 0)OLFN=1.
IF (OLFL EQ 9)OLFN=9.

```

Survey of Inmates in State and Federal Correctional Facilities, 2002 (SISFCF) Cases

```

COMPUTE EMPLOYED=0.
IF (V1747 EQ 1 & V1748 EQ 1)EMPLOYED=1.
IF (V1747 EQ 7 | V1747 EQ 8 | V1748 EQ 7 | V1748 EQ 8)EMPLOYED=9.
COMPUTE UNDEREMP=0.
IF (V1747 EQ 1 & V1748 EQ 2)UNDEREMP=1.
IF (V1747 EQ 7 | V1747 EQ 8 | V1748 EQ 7 | V1748 EQ 8)UNDEREMP=9.
COMPUTE UNEMPLOY=0.
IF ( (V1747 EQ 2 & V1750 EQ 1) | (V1747 EQ 1 & V1748 EQ 3 & V1749 EQ 1) )
UNEMPLOY=1.
IF (V1747 EQ 7 | V1747 EQ 8 | V1748 EQ 7 | V1748 EQ 8)UNEMPLOY=9.
COMPUTE NILF=0.

```

```

IF ((V1750 EQ 2) | (V1749 EQ 3 & V 1749 EQ 2))NILF=1.
IF (V1747 EQ 7 | V1747 EQ 8 | V1750 EQ 7 | V1750 EQ 8)UNDEREMP=9.
COMPUTE OLFL=0.
IF (V1751 EQ 01 | V1758 EQ 08 | V1760 EQ 10 | V1765 EQ 15)OLFL=1.
IF (V1769 EQ 2 | V1769 EQ 8)OLFL=9.
COMPUTE OLFN=0.
IF (NILF EQ 1 & OLFL EQ 0)OLFN=1.
IF (V1769 EQ 2 | V1769 EQ 8)OLFN=9.

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