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Desistance From Crime

Theoretical, Empirical, Methodological, and Policy Considerations

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In recent years, the growing literature on the topic of desistance from crime and deviant behavior has generated a large body of knowledge on this dimension of the criminal career. Despite these efforts, it has been suggested that our understanding of the processes underlying desistance remains limited. The objective of the current article is to offer a critical assessment of past desistance research and to highlight some unresolved issues in this area. Theoretical, empirical, methodological, and policy issues are discussed.

Keywords: desistance; age-crime distribution; criminal careers; life-course

Although desistance has become an increasingly popular research topic in recent years, some authors have argued that the state of knowledge on this topic is still relatively limited (Bushway, Thornberry, & Krohn, 2003; Farrall & Bowling, 1999; Farrington, 2003; Laub & Sampson, 2001; Le Blanc & Loeber, 1998; Piquero, Farrington, & Blumstein, 2003; Uggen & Piliavin, 1998). More specifically, it has been suggested that very little is known about the causal processes underlying desistance (Laub & Sampson, 2001; Piquero et al., 2003).

This article does not seek to offer a comprehensive review of the literature on the topic of desistance from crime, mainly because such reviews have been provided in recent publications (e.g., Laub & Sampson, 2001). Rather, the objective of this article is to identify some of the main limitations of this literature and to raise some key theoretical, empirical, methodological, and policy issues relating to the analysis of desistance from crime.

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Why Study Desistance?

The association between age and crime is one of the most established facts in the field of criminology. It is generally agreed that aggregate crime rates peak in late adolescence/early adulthood and gradually drop thereafter, but there is still very little consensus regarding the cause of this decline (Hirschi & Gottfredson, 1995; Maruna, 2001; Moffitt, 1993a; Rhodes, 1989). A more thorough understanding of the processes underlying desistance from crime can provide insights on this important question.

Hirschi and Gottfredson (1983; see also Gottfredson & Hirschi, 1990) believed that the predictors of the onset of delinquency are similar to those of persistence and desistance from crime and that these parameters are all behavioral manifestations of one underlying construct (e.g., criminal propensity). Akers (1985) also argued that the variables explaining the onset of delinquency are similar to those explaining desistance from crime (e.g., delinquent peer associations). Conversely, Farrington et al. (1990) maintained that the causes and correlates of onset are likely to be different from those of desistance and persistence in crime, a concept that Uggen and Piliavin (1998) have referred to as asymmetrical causation (see also Fagan, 1989; Farrington & Hawkins, 1991; Laub, Nagin, & Sampson, 1998; Le Blanc & Loeber, 1998; Nagin & Farrington, 1992). Others have argued that the predictors of early desistance may be different from those of late desistance (Weitekamp & Kerner, 1994).

From a theoretical viewpoint, the potential implications linked to the issue of asymmetrical causation are of substantial importance. If the predictors of onset are indeed different from those of desistance, then this would defy some of the basic principles of a general theory of crime. From a policy viewpoint, a better understanding of the predictors of desistance would provide valuable information for post-onset intervention efforts. If the predictors of desistance are similar to those of onset, then this would suggest that it is possible to make accurate long-term predictions about desistance.

Many studies have identified a small group of offenders who account for a large proportion of all criminal activities and who continue to commit crime at a high rate across the life course; these are the so-called chronic offenders (Farrington & Wikström, 1994; Gottfredson & Hirschi, 1990; Hirschi & Gottfredson, 1983; Moffitt, 1993a; Sampson & Laub, 1992, 1993; West & Farrington, 1977; Wilson & Herrnstein, 1985). Such studies tend to stress the importance of early detection and intervention to prevent chronic or persistent offending. However, developmental crime prevention measures are not always among policy makers' priorities, and it is important to consider alternative prevention strategies. What type of preventive measures can be adopted after individuals have initiated criminal behavior? In a post-onset context, what should be the target areas for intervention initiatives? Do these differ from one period of the life course to another?

Once onset has occurred, efforts should be invested in limiting the length, intensity, and seriousness of criminal careers. Identifying life course transitions and cognitive

factors that contribute to desistance from crime can provide useful information for post-onset interventions. For instance, it has been suggested that acquiring a better understanding of the cognitive processes that promote desistance from crime may be highly useful in the development of efficient cognitive-behavioral programs (Ward, Hudson, Johnston, & Marshall, 1997). Improved social and cognitive skills may result in the establishment of stronger social bonds and increased social integration.

An increasing number of researchers seem to agree that there is both stability and change in offending patterns across the life course (Ezell & Cohen, 2005; Farrington & West, 1995; Horney, Osgood, & Marshall, 1995; Moffitt, 1993a; Sampson & Laub, 1993, 1995). The fact that offending trajectories in adulthood are not fully explained by childhood experiences highlights the importance of change and the need for sustained postonset intervention efforts to trigger and accelerate the desistance process.

Challenges and Issues to Consider in the **Study of Desistance From Crime**

Defining, Operationalizing, and Measuring Desistance

In an extensive review of the desistance literature, Laub and Sampson (2001) argued that few studies have offered an operational definition of desistance and that there is currently no consensus on this issue (see also Maruna, 2001; Piquero et al., 2003). "Can desistance occur after one act of crime?" (Laub & Sampson, 2001, p. 6). Is the desistance process characterized by a reduction in offending frequency or seriousness of crime (Bushway, Piquero, Broidy, Cauffman, & Mazerolle, 2001)? How many years of nonoffending are required to establish with certainty that desistance has occurred (Bushway et al., 2001; Laub & Sampson, 2001, 2003; Maruna, 2001; Piquero et al., 2003)?

Various definitions of desistance have been developed in the literature. Meisenhelder (1977) defined desistance as exiting, that is, the "successful disengagement from a previously developed, and subjectively recognized, pattern of criminal behavior" (p. 319). Drawing on ideas developed by Le Blanc and Fréchette (1989), Loeber and Le Blanc (1990) offered a definition of desistance that integrates four dimensions. This process view of desistance stipulates that before criminal activity ceases completely, lambda declines, offenders become increasingly specialized and engage in more minor offenses, and a culmination point is reached. Uggen and Kruttschnitt's (1998) definition of behavioral desistance implies a shift from a state of offending to a state of nonoffending and its maintenance. According to Maruna (2001), the definition of desistance needs to emphasize maintenance rather than termination. Bushway et al. (2001) defined desistance as "the process of reduction in the rate of offending (understood conceptually as an estimate of criminality) from a nonzero

level to a stable rate empirically indistinguishable from zero" (p. 500). Indistinguishable from zero refers to the idea that offending rates become indistinguishable from those of nonoffenders. Because criminal events often are dependent on circumstantial factors and chance, the authors further argued that the desistance process should focus on changes occurring in the propensity to offend (i.e., criminality) rather than on changes in crime.

Uggen and Massoglia (2003) argued that "because conceptual and operational definitions of desistance vary across existing studies, it is difficult to draw empirical generalizations from the growing literature on desistance from crime" (pp. 316-317). The authors raise an important question: How much (or how little) deviance is required to make up desistance? Table 1 offers a summary of some of the definitions used in various studies.

Table 1 illustrates the substantial degree of variability in the conceptualization of desistance, which has led to disparate results regarding the causes and correlates of desistance from crime. Most studies have relied on official data and dichotomous measures of desistance (Le Blanc, 1993). Findings seem to vary according to the type of measurement method privileged (i.e., official vs. self-reported desistance; Le Blanc & Fréchette, 1989; Nagin, Farrington, & Moffitt, 1995; Uggen & Massoglia, 2003). Bushway et al. (2003) argued that the selection of cutoff points is arbitrary and varies from one study to another, making it difficult to compare findings. The disparity in definitions observed in Table 1 inevitably raises the question as to whether it would be desirable to reach a consensus on how to define desistance to reach some degree of generalizability regarding the predictors of desistance from crime.

Follow-Ups Extending Past Adolescence

Another key issue in desistance research is the length of follow-up required to study desistance (Laub & Sampson, 2003). Estimates of the age of termination are dependent on the length of the follow-up period (Bushway et al., 2003; Le Blanc & Loeber, 1998). Farrington and Wikström (1994) argued that short follow-up periods can result in misleading findings. In a follow-up of adjudicated men up to age 25, Le Blanc and Fréchette (1989) found that the average age at last conviction was 19.9 years. When the follow-up extended to the early 40s, the average age at last conviction was 31 years.

One of the strongest arguments supporting the need to study desistance beyond adolescence is portrayed through the fact that most juvenile delinquents do not become adult offenders (Moffitt, 1993a). In this regard, adolescent samples may not be ideal for the study of persistent criminal offending and desistance. Although it is possible to study the desistance process using cross-sectional or retrospective data, long-term, prospective follow-ups help to establish with increased certainty whether desistance has actually occurred. The intermittent character of offending patterns may sometimes lead to the illusion of desistance.

Table 1 Operational Definition of the Concept of Desistance in Past Studies

Study	Definition
Farrington and Hawkins (1991)	Conviction at age 21 but not between ages 21 and 32
Farrington and Wikström (1994)	Age at the last officially recorded offense up to age 25
Haggard, Gumpert, and Grann (2001)	During the follow-up period, no reconviction in the previous 10 years (at least)
Kruttschnitt, Uggen, and Shelton (2000)	Absence of new officially recorded offenses or probation violation throughout a 2-year period
Laub and Sampson (2003)	Absence of arrest (follow-up to age 70)
Loeber, Stouthamer-Loeber,	Nonoffending throughout a period of less than a year
Van Kammen, and Farrington (1991)	
Maruna (2001)	Individuals who identified themselves as long-term habitual offenders, who claimed that they would not be committing offenses in the future, and who reported at least 1 year of crime-free behavior
Maruna, LeBel, Burnett, Bushway, and Kierkus (2002)	Absence of reconviction after release from prison during a 10-year window
Mischkowitz (1994)	Last conviction having occurred before age 31 and lack of conviction or incarceration for at least 10 years
Pezzin (1995)	Individuals who reported having committed offenses in the past but who did not report any criminal income in 1979
Sampson and Laub (1993)	Juvenile delinquents who were not arrested as adults
Shover and Thompson (1992)	No arrests in the 36 months following release from prison
Uggen and Kruttschnitt (1998)	Behavioral desistance: Absence of self-reported illegal earnings during a 3-year follow-up period
	Official desistance: No arrests during a 3-year follow-up period
Warr (1998)	Individuals who did not report having committed any offenses in the past year

False Desistance and Patterns of Intermittency in Criminal Careers

Desistance often is defined as the last officially recorded or self-reported offense. Because most longitudinal studies have followed up on individuals throughout a relatively limited period of the life course, the issue of false desistance may result in misleading conclusions about the desistance process (Blumstein, Cohen, & Hsieh, 1982; Blumstein, Farrington, & Moitra, 1985; Brame, Bushway, & Paternoster, 2003; Bushway et al., 2001, 2003; Bushway, Brame, & Paternoster, 2004; Greenberg, 1991; Laub & Sampson, 2001). Many have argued that definite desistance only occurs with death (Blumstein et al., 1982; Elliott, Huizinga, & Menard, 1989; Farrington & Wikström, 1994). Piquero (2004) defined intermittency as "the time between successive criminal events, controlling of course for exposure time" (p. 108). Mischkowitz (1994) made the distinction between interrupting the criminal career and actual desistance. Elliott et al. (1989) made reference to "suspension" from criminal activity, implying that the discontinuation of offending activity is not permanent. Burnett (2004) referred to ambivalence in the decision to desist from crime and argued that "desistance is a process which involves reversals of decisions, indecision, compromise and lapses" (p. 169; see Horney et al., 1995, for similar results).

Intermittent patterns of offending in criminal careers may lead to the false interpretation that offenders have ceased offending. Individuals may cease offending for any given period of time, but this does not necessarily imply that they have permanently ceased all offending activities (Piquero, 2004). This issue of temporary versus permanent desistance from crime (or zig-zag; see Laub & Sampson, 2003; Piquero, 2004) has been highlighted by criminal career researchers (Barnett, Blumstein, & Farrington, 1989; Bushway et al., 2001, 2004; Laub & Sampson, 2001; Piquero et al., 2003), although very few studies have explored this question in depth (Piquero, 2004).

It is plausible to hypothesize that all criminal careers are characterized by some degree of intermittency across the life course, to a lesser or greater extent. Offenders sometimes offend at high and sometimes at low rates. Termination is not likely to occur abruptly; the patterns of intermittency observed in criminal careers underline the importance of perceiving desistance as a process as opposed to a discrete state.

The Desistance Process: Static Versus Dynamic Models

Most studies on desistance have adopted a dichotomous or static measure of desistance rather than a process view of the phenomenon (dynamic definition). As a result, these studies do not account for changes in rates of offending or for the progression along the desistance process. In recent years, an increasing number of researchers have acknowledged the relevance of perceiving desistance as a gradual process (Bottoms, Shapland, Costello, Holmes, & Muir, 2004; Bushway et al., 2001, 2003; Fagan, 1989; Greenberg, 1975; Haggard, Gumpert, & Grann, 2001; Laub et al., 1998; Laub & Sampson, 2001; 2003; Le Blanc, 1993; Loeber & Le Blanc, 1990; Maruna, 2001; Shover, 1983). The complete cessation of offending activities is unlikely to occur suddenly, especially among individuals who have been highly active in offending from a young age. For this reason, static definitions of desistance (i.e., termination) may mask the progress exhibited by individuals across various stages of the desistance process (see Bushway et al., 2001, for a similar discussion). Therefore, focusing solely on the final state of termination provides little guidance for intervention initiatives, neglecting to offer support and reinforcement in periods when they are most needed (i.e., periods of reassessment and ambivalence toward desistance/persistence).

Although different individuals may cease offending at the same age, their criminal careers may be distinguished by very different processes (in terms of frequency, seriousness, and length). In a comparison of static and dynamic models of desistance, Bushway et al. (2003) concluded, "The dynamic model is much more articulate than the static model about the nature of the desistance process" (p. 146); furthermore, the agreement rate between the two approaches was weak (4.8%).

In summary, in cases where prospective longitudinal data are not available, where observation periods are short, and where dichotomous measures of desistance are employed, desistance is more likely to refer to a state of "temporary nonoffending" (Bushway et al., 2001). This is not to say that cross-sectional data should not be used in desistance research. Such data may be helpful in investigating the variables that trigger the desistance process but do not contribute much to the explanation of the maintenance of desistance efforts.

Focusing on Within-Individual Change

Some authors have stressed that little attention has been given to withinindividual change in offending patterns across the life course (Horney et al., 1995; Le Blanc & Loeber, 1998; Sampson & Laub, 1992). In their discussion on withinindividual change, Le Blanc and Loeber (1998) stated, "An important feature of this approach is that individuals serve as their own controls" (p. 116), underlining the importance of viewing desistance as a process. Past research has mainly focused on contrasting offending patterns between different offenders (e.g., those who desist vs. those who persist). Unsurprisingly, these between-individual comparisons have shown that individuals with higher self- and social control are more likely to desist from crime when compared to those with lower self- and social control. What is lacking in desistance research is not a contrast of desisters versus persisters but rather an understanding of the internal and external factors that promote the desistance process within individuals. In other words, using individuals as their own controls, do changing cognitive and social characteristics have an impact on the progress made toward the termination of criminal careers? This question is crucial to the development of efficient post-onset intervention initiatives. From a theoretical viewpoint, the emphasis on within-individual change speaks directly to debates on stability and change, namely, the general theory hypothesis (Gottfredson & Hirschi, 1990).

Since Cronbach and Furby's (1970) harsh assessment of change scores, researchers have been reluctant to use this method to assess within-individual change. Other methods have been developed in the literature. Wright and Cullen (2004) included a measure of past offending in their analyses, which "transforms the outcome variable into a measure of change in criminal conduct" (p. 194). Accounting for past offending promotes a process view of desistance and also controls for persistent heterogeneity differences. Wright and Cullen argued that accounting for prior criminal behavior "reduced the inverse effect of being married to statistical insignificance and generally reduced the substantive strength of the other predictors of crime" (p. 194). The same was found to be true for the association between employment and drug use. These results

suggest that adopting a process view of desistance may generate different results from using a dichotomous definition of desistance.

Pogarsky, Piquero, and Paternoster (2004) used residual change scores (actual score minus predicted estimate) to assess changes in the perceived certainty of punishment (also see Paternoster, Saltzman, Waldo, & Chiricos, 1985). Essentially, the outcome variable employed in this method is the variance in the measure at Time 2 (T2) that is unexplained by the measure at Time 1 (T1). In other words, residual change scores investigate how much of the T2 measure is not explained by the T1 measure and identify the factors that account for this remaining unexplained variance. As argued by Pogarsky et al., the introduction of residual change scores controls for the effect of the T1 score and "measures the change in sanction certainty between Times 1 and 2 that cannot be attributed to the Time 1 level of sanction certainty alone and must, therefore, be due to other factors" (p. 355). Such methods have provided valuable insight on possible ways of measuring within-individual change, but more discussion is still needed on this topic.

Who Should Be Eligible for Inclusion in the Analysis of Desistance?

Another important issue that must be taken into account in the study of desistance from crime relates to the level of initial offending required to be eligible for inclusion in the analysis. Some authors have raised the question as to whether it is relevant to study desistance from crime among occasional offenders or those who only offend in adolescence (Laub & Sampson, 2001; Le Blanc, 1993; Le Blanc & Loeber, 1998). Indeed, these individuals may be less relevant to theory and policy (see Laub & Sampson, 2001, for a similar discussion). Should a shift from one offense to none be regarded as desistance? One-time or low-rate offenders are likely to be characterized by higher self- and social control and also may present lower risks of persistence in crime when compared to more frequent offenders. Therefore, the inclusion of occasional or situational offenders in any analysis of desistance is likely to increase the estimated predictive power of measures of cognitive predispositions and social bonds.

Ideally, it would be interesting to replicate findings with and without the inclusion of occasional offenders and to contrast results. The objective of such a replication would be to investigate whether conclusions drawn about the prediction of desistance differ according to the threshold of offending imposed. It also may be useful to impose a threshold of seriousness to avoid only documenting trivial behavior (despite the common inclination to include all offending behavior for the purpose of increasing prevalence rates and facilitating statistical analyses).

Official Versus Self-Reported Desistance

Uggen and Kruttschnitt (1998) made the distinction between two types of desistance. Behavioral desistance refers to the shift from self-reported crime to noncrime, whereas official desistance refers to the absence of official offending (measured through arrests or convictions). Although long-term follow-ups with information about self-reported crime spanning throughout various periods of the life course are scarce, it would be worthwhile to investigate whether the predictors of official desistance are similar to those of self-reported desistance.

To some extent, findings based on official records of crime (arrests or convictions) reflect the social reaction to the offending behavior. The predictors of official desistance may partly reflect the criteria used by decision makers in the criminal justice system to assess the risks of future offending. In this regard, measures of cognitive predispositions and social bonds may be stronger predictors of official rather than self-reported desistance. For instance, individuals who have a history of employment instability, known substance use problems, and a greater number of past convictions may be perceived as lacking proper social integration and viewed as high risks for recidivism. In contrast, family-oriented individuals who are employed may be perceived as unlikely candidates for reoffending. Also, decision makers may be more lenient with individuals who assume responsibility and are apologetic for their actions, and less tolerant with offenders who adopt a victim stance and attribute blame to others. A comparison of the predictors of official and self-reported desistance would shed some light on these questions and assess whether the use of different measurement methods produces divergent findings.

The Respective Roles of Cognitive Predispositions and Social Bonds in the Desistance Process: Issues of Self-Selection and Sequencing

Another area that deserves more attention in desistance research relates to whether the impact of social bonds on desistance is maintained when accounting for cognitive predispositions, and vice versa. Evans, Cullen, Burton, Dunaway, and Benson (1997) found that when including a measure of self-control, "the effects of the social bonds measures (quality of relationships, marital status, attachment to church, occupational attainment) in the equation are minimal" (p. 491). Their findings largely support the general theory of crime (Gottfredson & Hirschi, 1990), but further replication is needed with different samples. It also would be useful to investigate whether changes in cognitive predispositions and social bonds promote the desistance process.

The issue of self-selection has been addressed by various researchers (Gottfredson & Hirschi, 1990; Laub & Sampson, 2001, 2003; McCord, 1994; Moffitt, 1993a; Pallone & Hennessy, 1993; Sampson & Laub, 1993; Uggen, 2000; Uggen & Massoglia, 2003). Because turning points and life events are not randomly assigned among individuals, it is difficult to assess whether these events are causes or correlates of desistance. Just as children with neuropsychological and other temperamental deficits are not randomly assigned to supportive or nonsupportive environments (Moffitt, 1993b), life course events may not be coincidental; these may occur as a result of a

process of self-selection and reflect underlying criminal propensities. Moffitt (1993b) referred to proactive interactions, which occur when individuals select environments or situations that support their lifestyle. Laub and Sampson (2001) concluded, "Selection is thus a threat to the interpretation of any desistance study" (p. 23). This issue highlights the limited state of knowledge regarding the mechanisms underlying desistance from crime.

Sampson and Laub (1993) offered solutions to address the biases associated with selfselection. First, by controlling for the level of self-control, Sampson and Laub (1993) assessed the impact of life course events on crime, independently from individual criminal propensities. Sampson and Laub (1993) also controlled for individual differences in propensity by carrying out separate analyses for the delinquent and nondelinquent groups, by adjusting offending rates to the period "not at risk" (time incarcerated), and by including unofficial reports of offending (self-reports, parent and teacher reports).

Does the event promote cognitive changes or do cognitive changes (maturation process, increasingly developed prosocial values and problem-solving skills, etc.) promote the occurrence of the event? If the former statement is correct, intervention efforts could prevent future offending by encouraging and facilitating the occurrence of such events (job training skills, marriage counseling, etc.). If the latter proposition is accurate, then intervention initiatives should focus more on helping offenders to develop appropriate cognitive skills.

Many authors have discussed the complexity of establishing temporal or causal order between cognitive processes, situational circumstances, and desistance from crime (Bottoms et al., 2004; Laub & Sampson, 2001; Maruna, 2001; Maruna, LeBel, Burnett, Bushway, & Kierkus, 2002; Mischkowitz, 1994; Shover, 1983). The unraveling of these sequences is thorny, mainly because situational and cognitive changes are often interdependent and may occur simultaneously (Maruna, 2001; Shover, 1983). Le Blanc (1993) summarized this idea:

Some potential variables may occur in such close proximity to desistance that, for all practical purposes, it is impossible to measure which comes first; moreover, they may have reciprocal influences. . . . For example, delinquency can be caused by a weak parental attachment and it may also weaken that bond. (p. 56)

Bottoms et al. (2004) suggested that cyclical processes come into play in the interactions between cognitive processes and behavioral changes. Mischkowitz (1994) made reference to chaos theory or the "butterfly effect" (or nonlinear dynamical systems theory, see Walters, 2002):

In the complex process of reintegration it is difficult to determine what come first and what second. . . . It is like pulling the trigger and starting a process of change that can be called a "conformative spiral" since it gradually is leading out of a delinquent way of life. (p. 325)

Le Blanc (2004) discussed the interactions between self-control, social control, and offending and argued that these two "general mechanisms of control" interact through various dynamic processes. These cyclical interactions generate criminal behavior. According to the author, chaos may occur when an individual offends regularly and displays weak social bonds and self-control. The key postulate in this theory is that dimensions of self- and social control are interdependent and interact in complex ways to produce offending behavior. In short, cognitive and situational processes often occur simultaneously, making it difficult to unravel causal sequences.

Measuring Criminal Propensity

The issues of measurement and operationalization of criminal propensity are not specific to the study of desistance from crime but are nonetheless highly relevant to this research question. Self-control, criminal propensity, criminality—these are different terms used to describe a similar concept, which is that of an internal predisposition to antisocial or criminal behavior. The various components of such thinking styles have been referred to as "cognitive predispositions" (Longshore, Turner, & Stein, 1996). Paternoster, Dean, Piquero, Mazerolle, and Brame (1997) argued that there is still no consensus in the literature regarding the definition of criminal propensity. Some studies have used early onset as an indicator of criminal propensity (Paternoster et al., 1997; Piquero, Paternoster, Mazerolle, Brame, & Dean, 1999; Sampson & Laub, 1993). Ouimet and Le Blanc (1996) used juvenile lambda, whereas Sampson and Laub (1993) used adolescent drinking habits ("excessive drinking before age 20"), self-reported offending, and temper tantrums as indicators of criminal propensity and low self-control.

Most studies agree on some key components in the definition of low self-control, namely, impulsiveness and risk seeking (see Gottfredson & Hirschi, 1990; Grasmick, Tittle, & Arneklev, 1993; Longshore, Chang, Hsieh, & Messina, 2004; Sampson & Laub, 1993). However, cognitive predispositions or thinking styles that may facilitate involvement in offending behavior extend beyond impulsiveness and thrill seeking. Ward, Fon, Hudson, and McCormack (1998) suggested that it may be useful to integrate a wide range of cognitive variables when investigating the offending process.

The literature on sex offending and cognitive-behavioral programs has investigated the role of other cognitive predispositions in the explanation of offending behavior (see Abel, Becker, & Cunningham-Rathner, 1984; Abel et al., 1989; Barriga, Landau, Stinson, Liau, & Gibbs, 2000; Bumby, 1996; Marshall & Barbaree, 1990; Murphy, 1990; Segal & Stermac, 1990; Ward, 2000; Ward et al., 1997, 1998; Ward, Hudson, & Marshall, 1995). These cognitive predispositions include (but are not limited to) concrete thinking ("limited abstract reasoning skills"; Ross & Ross, 1995, p. 73), cognitive rigidity ("inflexible, narrow, intolerant of ambiguity and dogmatic" way of thinking; Ross & Ross, 1995, p. 74), externality (deterministic attitudes toward life events), interpersonal cognitive problem-solving skills (problem-solving deficits in interactions with others), egocentricity (lack of empathy), self-centered value system (indifference toward the needs of others), and the lack of critical reasoning (tendency to lack self-criticism).

In summary, many cognitive predispositions and thinking styles integrated in the literature on sex offending and cognitive-behavioral programs have been largely overlooked in the mainstream criminological literature, and it may be relevant to integrate some of these measures in the analysis of desistance from crime.

The Changing Structures of Social Bonds

For decades, criminologists have advocated the important role of social bonds in the explanation of offending behavior (Farrington & West, 1995; Glueck & Glueck, 1974; Gottfredson & Hirschi, 1990; Hirschi, 1969; Laub & Sampson, 2003; Le Blanc & Fréchette, 1989; Matza, 1964; Nye, 1958; Reiss, 1951; Sampson & Laub, 1993; Wilson & Herrnstein, 1985). However, many changes have occurred in the social structures and general societal values, and it may be that social bonds have taken on a new form in today's society. For instance, the Glueck men used in Sampson and Laub's studies consisted of two samples (one delinquent, one nondelinquent) of men born between 1922 and 1929. The study began in 1939, in a social context that was very much different from contemporary society. In a period when the military was more prominent and considered to be a significant source of social control, when societies were much more family oriented and divorce rates not even comparable to contemporary rates, it is plausible to hypothesize that social bonds played a more important role in the desistance process of offenders during that period.

The measurement of social bonds may require some adjustment to the changing values of contemporary society. For instance, past studies have found that marriage has a greater crime-inhibiting effect when compared to cohabitation with a partner (Farrington & West, 1995). However, cohabitation has become a more frequent occurrence and individuals tend to marry at older ages; the same is true for pregnancy outside of wedlock. Similarly, the competitive job market has resulted in increased rates of higher education among the population. There is a tendency to remain in school for an increased number of years and to penetrate the job market at later ages. In this regard, some social bonds measures traditionally measured in late adolescence/early adulthood, such as the degree of commitment to the job and attachment to the employer and coworkers, do not seem as relevant as in past decades. Individuals who pursue higher education may hold part-time or temporary employment, and the level of attachment to these jobs is questionable. Academic or professional ambition may be a more accurate measure of the level of attachment to employment.

In summary, when using contemporary samples, it may be worthwhile to adapt measures of social bonds to the changing societal norms and values. Failure to do so may offer a biased interpretation of the role of social bonds in the desistance process.

Are Offender Typologies Useful to the Study of Desistance From Crime?

In recent years, empirical evidence in criminal career research has "suggested the existence of distinct types of offenders such as early starters, late starters, persisters, desisters, occasionals, and chronics" (Paternoster et al., 1997, p. 236). Some authors have underlined some of the limitations of the typological approach, mainly issues linked to parsimony, offender heterogeneity, and overlap between the groups (Bushway et al., 2003; Gibbons, 1971; Gottfredson & Hirschi, 1990; Laub & Sampson, 2003; Seelig, 1956; Tremblay, 1993). Maruna (2001) argued that the dichotomy between persisters and desisters is useful for statistical purposes but that it is subject to great intragroup variability. Maruna further maintained that "the two groups (desisting and persisting offenders) represent similar individuals in different stages of the process of change . . . and not two starkly different 'types' of people' (p. 74). Similarly, Fattah (1993) argued that offenders are not fundamentally different from nonoffenders and that "the vast majority of criminals are normal people driven by the same motives that drive all of us" (p. 229).

Laub and Sampson (2003) formulated a similar idea. Their analyses of life narratives also showed the ambiguities associated with defining groups as persisters or desisters and added that "the longer the time frame, the more uncertain the simple taxonomy becomes" (p. 240). The authors rejected the idea that "offenders can be neatly grouped into distinct categories, each displaying a unique trajectory and etiology of offending" (p. 4). They further added that offender typologies "do not capture the patterning or complexity of criminal offending over the full life course" (p. 248) and that this issue cannot be resolved with the use of more sophisticated statistical techniques. Such arguments strongly question the validity of offender typologies and other forms of classification.

The logic underlying the use of offender typologies is that explanatory and causal processes vary between offenders, thus not supporting the existence of a "general theory of desistance." Empirical research has yet to establish whether the causes that trigger and sustain the desistance process vary across different individuals and whether desisters truly differ from persisters and nonoffenders.

Investigating the Role of Criminal Opportunities

Past research has failed to account for the role of criminal opportunities and situational factors in the desistance process. In general, studies have shown that measures of self- and social control have limited explanatory power in the prediction of criminal behavior (Grasmick et al., 1993; Krohn, Massey, Skinner, & Lauer, 1983; Longshore et al., 2004). This suggests the potential crucial importance of criminal opportunities in the explanation of desistance from crime.

Generalizability

Can findings generated from studies on desistance from crime be extended to desistance from other forms of social behavior? Is crime a "distinct category of human behavior" (Fattah, 1993, p. 226)? Laub and Sampson (2001) argued that the processes underlying desistance from crime and other types of problem behavior (substance use, etc.) share many similarities (see also Gottfredson & Hirschi, 1990). Does low self-control in one area translate into low self-control in all areas or is this propensity specific to certain behaviors? Further evidence is needed on this question.

Another issue to be considered is whether current findings on the prediction of desistance can be generalized to all societies. Most criminological research has been based on Western samples (i.e., from developed and industrialized countries). It may be that these findings cannot be generalized to developing nations, countries with different political and economic systems, and those characterized by increased social disorganization. In such contexts, if the lack of cognitive skills and weak social institutions are the norm rather than the exception, it is not clear whether the traditional predictors of desistance would apply to such environments. The same issue can be raised with regard to countries with a relatively high degree of cultural homogeneity. Comparative studies on desistance would be quite useful in addressing these issues, with samples from developing nations or noncapitalistic systems.

Conclusion

Based on arguments presented in this paper, it is recommended that the following issues be considered in the measurement and operationalization of desistance:

 Emphasis on within-individual change is more valuable for guiding post-onset intervention initiatives, namely because such a focus allows monitoring progress and can potentially provide support during crucial periods (i.e., periods of ambivalence). In this regard, the study of desistance needs to extend beyond betweenindividual comparisons.

- Desistance is best viewed as a process and is unlikely to occur abruptly, especially among high-rate offenders. In this regard, a sole emphasis on the final state of termination may overlook valuable information about changes occurring in criminal career patterns across different periods of the life course. In other words, instead of focusing exclusively on the point of termination, it may be worthwhile to invest efforts in better explaining the mechanisms that come into play during periods in which offenders are in the process of desisting.
- It may be useful to integrate various criminal career parameters when measuring desistance (frequency, seriousness, etc.), in order to better capture the changes occurring in the dynamics of offending.

This article aimed to offer a summary of the limitations of the current state of knowledge on desistance from crime. Some key questions relating to desistance have been identified, which raise some important recommendations for future research:

- 1. Do the predictors of desistance vary when adopting an extended, dynamic definition of desistance?
- 2. Do these predictors vary across different samples? Do they vary between different measurement methods (self-reports vs. official records) or with the threshold of offending imposed?
- 3. Are the predictors of short-term (temporary) desistance similar to those of longterm (permanent) desistance?
- 4. What are the most accurate methods of measuring within-individual change?
- 5. Is there a need to reconceptualize traditional measures of self- and social control?
- 6. How do cognitive and social variables explain changes in offending behavior? Does the former group have stronger predictive weight than the latter, or vice versa?
- 7. Is it possible to make long-term predictions about desistance?
- 8. To what extent do changes in social bonds and cognitive predispositions predict desistance?
- 9. Are offender typologies useful to the analysis of desistance from crime? How different are desisters from persisters and nonoffenders?
- 10. What is the role of criminal opportunities in the desistance process?

First, there is a need to contrast findings with static and dynamic measures of desistance. It has been suggested that focusing solely on termination may not fully capture the changes that occur in offending patterns throughout the desistance process, and this issue needs to be examined more in depth. Discrepancies in results between static and dynamic measures of desistance are likely to be more prominent among high-rate offenders, namely, because termination rates tend to be lower among these individuals.

Second, replication of desistance findings across different samples is needed. This emphasis on comparative research has been highlighted in the desistance literature (Uggen & Kruttschnitt, 1998). Very few studies have compared criminal career

patterns across different samples. Farrington and Wikström (1994) summarized the advantages associated with cross-cultural comparisons:

Ideally, coordinated longitudinal studies of criminal careers in different countries are needed, including comparable self-report and official record measurements at different ages. Such studies would help to determine the extent to which criminal career results were truly universal and replicable, and they would also help to locate the sources of any observed differences: in individual characteristics or in social, cultural, legal or criminal justice processes. (p. 85)

There are two important benefits to the comparative approach. First, it allows for the replication of findings generated from one sample to another. Second, the integration of different data sets results in more thorough research, namely, because the limitations of one study can be compensated by the strengths of the other. In this regard, the data complement one another and can potentially offer a more complete picture of the desistance process.

On the same token, the integration of self-reports and official records also may offer a more complete picture of the desistance process. Uggen and Piliavin (1998) emphasized the importance of extending the explanation of desistance to selfreported offending rather than limiting it to officially defined deviant populations (see also Laub & Sampson, 2001, 2003; Le Blanc & Fréchette, 1989; Nagin et al., 1995; Uggen & Piliavin, 1998). Most criminal career research has relied on official data (Le Blanc & Loeber, 1998) and has rarely integrated both official records and self-reports of offending (Farrington & Wikström, 1994; Nagin et al., 1995; Piquero et al., 2003). The importance of integrating both methods in the study of criminal behavior has been highlighted in the literature (Blakely, Kushler, Parisian, & Davidson, 1980; Erickson, 1972; Farrington, 1973; Laub & Sampson, 2001; Le Blanc & Fréchette, 1989; Nagin et al., 1995; Sampson & Laub, 1992, 1993). The strengths and limitations of both self-reports and official records have been addressed in previous studies (Blackmore, 1974; Blumstein, Cohen, Roth, & Visher, 1986; Erickson, 1972; Hindelang, Hirschi, & Weis, 1979; Lab & Allen, 1984). Again, when integrating self-reports and official records, the limitations of one method are compensated by the strengths of the other.

Third, data collected within shorter time intervals are needed to investigate the determinants of patterns of intermittency in criminal careers. On the other hand, follow-ups extending over various periods of the life course would be useful in disentangling the predictors of temporary versus permanent desistance.

Fourth, future research should devote more efforts to identifying the most accurate methods of measuring within-individual change.

Fifth, mainstream criminological research can benefit from an integration of some of the measures of cognitive predispositions included in the literature on sex offending and cognitive-behavioral programs. There is a need for greater communication among researchers specializing in different areas of criminology. Another issue that may be worth exploring is whether traditional measures of social bonds need to be adapted to contemporary samples.

Sixth, the respective roles of cognitive predispositions and social bonds in the desistance process need to be disentangled. Investigating the impact of early measures of cognitive predispositions and social bonds on desistance will shed some light on the ability to make long-term predictions about desistance from crime. Moreover, it would be quite useful to explore whether changes in social bonds and cognitive predispositions also contribute to the desistance process.

Seventh, it has been suggested that offender classifications in desistance research, namely, the contrast between desisters and persisters, may not be theoretically accurate (Laub & Sampson, 2003; Maruna, 2001). Future research should compare and contrast the similarities and differences between these groups and nonoffenders.

Eight, the potential crucial role of criminal opportunities in explaining the desistance process has been highlighted in this article. There is a need to identify accurate methods of operationalizing the concept of criminal opportunity to better understand the interactions between criminal opportunity, social context, and cognitive predispositions across various stages of the life course.

Finally, some have argued that an integration of both qualitative and quantitative research methods can potentially offer a more complete picture of offending across the life course and a better understanding of the processes underlying desistance from crime (Laub & Sampson, 2001, 2003; Piquero et al., 2003; Sampson & Laub, 1992, 1993). The advantage of integrating both methods is that each can "challenge and inform the other" (Laub & Sampson, 2003, p. 277). Maruna (2001) argued that "subjective aspects of human life (emotions, thoughts, motivations, and goals) have largely been neglected in the study of crime" (p. 8). Qualitative research is useful for identifying key research questions about topics that are not well understood and also for formulating hypotheses, and quantitative data may be used to test whether these hypotheses can be generalized to a wider population.

It remains unclear whether the variables that trigger the desistance process (i.e., predictors of termination from crime) are similar to those of the maintenance of nonoffending (i.e., predictors of sustained, permanent desistance). Qualitative research has highlighted the importance of offender reintegration, which is directly linked to the idea of maintenance of desistance efforts. In his interviews with ex-offenders, Maruna (2001) found that individuals who expressed the will to desist from crime got little support when they tried to reintegrate into society after their release from prison. Overall, these men argued that they had received very little support to facilitate the transition from prison to society. In fact, they reported having often been targeted by the police, even for offenses that they had not committed. The effects of stigmatization seemed to have hindered their desistance efforts. In Burnett's (2004) study, persisters experienced more social difficulties after release (with regard to employment, accommodation, stable relationships, delinquent peers, and substance

use). Kazemian and Farrington (2006) recently found that as the time lag between successive offenses increased, the residual number of years and offenses remaining in criminal careers declined. In this regard, the remaining length and intensity of criminal careers is likely to be reduced for individuals who can resist the immediate temptations of crime after release from prison.

Hence, there appears to be a genuine need to invest more efforts in offender reintegration and to provide individuals with tools that will allow them to maintain desistance efforts and resist temptations to engage in criminal behavior (Haggard et al., 2001; Laub & Sampson, 2003; Maruna, 2001). Laub and Sampson (2001) argued that "it is critical that individuals are given the opportunity to reconnect to institutions like family, school, and work after a long period of incarceration or any criminal justice contact for that matter" (p. 58). Desistance is an ongoing process and is not likely to occur suddenly. Rehabilitation aims to improve overall cognitive skills, especially in challenging social situations, and reintegration allows sustaining these efforts when they are being tested. In short, desistance is likely to be maximized when intervention efforts integrate both rehabilitation and reintegration dimensions.

To conclude, although desistance research has greatly developed in the past few years, some important questions remain unexplored. Considering all the diverse methodologies that can be used in the analysis of desistance from crime, it comes as no surprise that researchers cannot reach a consensus on this question. This highlights the need to increase communication between researchers in order to draw some type of empirical generalization from desistance research.

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