Crime & Delinquency
1–28

DOI: 10.1177/0011128715619736
cad.sagepub.com
SAGE

Does the Nature of the Victimization–Offending Association Fluctuate Over the Life Course? An Examination of Adolescence and Early Adulthood

Christopher J. Schreck[1], Mark T. Berg[2], Graham C. Ousey[3], Eric A. Stewart[4], and J. Mitchell Miller[5]

Abstract

Decades of criminological research has established that victimization is strongly connected with offending—this pattern is among the most durable in the criminological literature. However, there are plausible reasons to believe that under some theoretically defined conditions, the association can vary across the life course. Using 10 waves from the Pathways to Desistance data, which follow more than 1,300 youth from early adolescence into adulthood, we model within-individual change in the victimization–offending association as well as evaluate possible theoretical reasons for this change. Our results show that the influence of victimization on offending weakens as people age, although the association remains positive across the life

[1]Rochester Institute of Technology, NY, USA
[2]University of Iowa, Iowa City, USA
[3]College of William and Mary, Williamsburg, VA, USA
[4]Florida State University, Tallahassee, USA
[5]University of North Florida, Jacksonville, USA

Corresponding Author:
Christopher J. Schreck, Department of Criminal Justice, Professor, Rochester Institute of Technology, 1 Lomb Memorial Drive, Rochester, NY 14623, USA.
Email: cjsgcj@rit.edu

course. The core substantive predictors, however, could not account for this temporal weakening of the association. We discuss the implications of these results for further theoretical development on offending.

Keywords
victim–offender overlap, criminal victimization, developmental, life course, longitudinal designs

Introduction

Over the past 20 years, the correlation between victimization and offending has gained acceptance as an important criminological fact. First reported more than a half-century ago by Wolfgang (1958) who observed that homicide victims often had lengthy arrest records, this association has been repeatedly confirmed in numerous studies using diverse samples, methods and social contexts (e.g., Jensen & Brownfield, 1986; Schreck, Stewart, & Osgood, 2008). Acknowledging the ubiquity of this correlation, Lauritsen and Laub (2007) go as far as to state, "We are unaware of any research that has examined the link between offending and victimization and failed to find a strong relationship" (p. 60). Moreover, because of impressive evidence of socio-demographic similarity between victims and offenders, pioneering victimization researchers have argued that the social sources of victimization and offending cannot be properly understood independent of one another (e.g., Gottfredson, 1984; Hindelang, 1976). There can be little doubt that inquiry regarding the role of victimization in the explanation of violent behavior has become centrally important to the discipline (see Berg, 2012).

Yet, many aspects of the victimization–offending relationship remain under-researched and poorly understood. A particularly salient but unresolved question is whether the victimization–offending association is stable or variable across the life course. On one hand, some criminological research leads to the expectation of a positive association that is persistent at all ages (e.g., Schreck, 1999) which implies that it is a time-invariant phenomenon. If the stability assertion is correct, it means that neither a person's age nor any age-graded variations in social factors are relevant for understanding the victimization–offending association. Alternatively, another possibility implied in the life-course perspective as well as some criminological theories (e.g., Agnew, 2002), is that the association between victimization and offending will substantially fluctuate at different stages of a person's life (Lauritsen, Sampson, & Laub, 1991). Indeed, the life-course perspective predicts that age-related alterations in sociogenic factors such as marriage

and employment may influence the nature of the victim–offender overlap. Research on this latter possibility is limited and additional work is needed to better understand this phenomenon.

In the current study, we use longitudinal data from the Pathways to Desistance project to address important questions regarding temporal stability and change in the victimization–offending association. We begin by estimating the extent to which the within-individual association between victimization and offending systematically varies as respondents traverse from their middle-teens to their 20s. To the extent that it does vary, we next consider whether the empirical evidence is more consistent with one of two life-course arguments: (a) the positive association between victimization and offending weakens with age, or (b) the positive association observed in adolescence switches directional signs, becoming negative during adulthood. Finally, we also examine whether explanatory variables drawn from key criminological theories can account for both the baseline association between victimization and offending as well as age-related variation in its magnitude.

Competing Perspectives on the Association Between Victimization and Offending Across the Life Course

A starting-point for thinking about the association between victimization and offending across the life course is found in the "stability perspective." Here, the effect of victimization on offending is relatively consistent across the life course; victimization elicits an adverse reaction for individuals of all ages. Whether victimization occurs in adolescence or mid-adulthood, it is consequential for personal functioning and well-being and thus contributes to contemporaneous adverse behavioral outcomes, which would include antisocial behavior. The stability notion is affirmed by Lauritsen and Laub's (2007) conclusion that virtually all studies report a strong and positive link between victimization and offending. However, no research has directly shown that *within-individual stability* characterizes this relationship over the life course, so the stability hypothesis cannot yet be accepted as an empirical fact. For instance, cross-sectional research is unable to capture temporal patterns; moreover, longitudinal random-effects models conflate within and between-person effects making them ill-equipped to address within-person change. As of now, evidence from data sets spanning different age groups tends to suggest that stability is the most common pattern.

The other possibility is that the nature of association between victimization and offending may change with age. Here, the research literature is both scant and inconclusive. Implicit in this body of research is the assumption

that childhood is an especially critical life stage when victimization has exaggerated adverse effects (Loeber & Farrington, 2011). Children and adolescents function largely outside of voluntary institutional roles involving stable commitments and thus enjoy limited autonomy from authoritative institutions (Manning, Longmore, & Giordano, 2007); but, at the same time children and adolescents also remain immersed in peer contexts that condone antisocial behavioral responses to victimizations (Jensen & Brownfield, 1986). Also implied is the notion that the transition to adulthood often instills a greater resilience to the effects of victimization, leading to a weakening of the victimization–offending association. As adult roles accumulate and become more salient, individuals become more entangled in restraints that limit non-conventional activities and antisocial conduct. However, limited theory and empirical evidence directly speaks to this broader conceptual assumption about the nature of change in the victim–offender overlap, in part because as noted earlier data that facilitate the study of within-individual change is not widely available (but see Averdijk, 2010; Daigle, Beaver, & Hartman, 2008; Ousey, Wilcox, & Fisher, 2011; Wittebrood & Nieuwbeerta, 2000) and within-person designs have only rarely been utilized (but see Berg & Loeber, 2011).

Some evidence in support of the idea that the strong positive association between victimization and offending diminishes with entry into adulthood is found in the Farrall and Calverley (2006) study of adult probationers, which reports that victimization transpiring in adulthood appeared to have no effect on the probability of later arrest. Similarly, other ethnographic research finds that older offenders are far less sensitive to acts of mistreatment that would have normally prompted them to engage in a retaliatory strike (Shover, 1996). Moreover, some research actually suggests that victimization and offending may become negatively related to one another in adulthood, such that an increase in victimization results in a withdrawal from offending. Speaking to this possibility, some ethnographic research reports that adult offenders cite victimization experiences as a source of their own desistance from crime (e.g., Cusson & Pinsonneault, 1986; Shover, 1996). This latter possibility implies that not only does the positive victimization–offending association weaken with age, but at certain points later in the life course the victimization–offending relationship will shift from positive to negative due to how changes in these events affect aspects of personal well-being.

Interpretations From the Life-Course Perspective

In general, the life-course perspective offers an avenue for conceptualizing the possibility of *variation* in the victimization–offending association at different

ages. This perspective is founded on the idea that the correlates of crime, which can include victimization, vary systematically in importance as a result of age-graded social processes. Societies create age-graded roles so that changes in age are expected to be accompanied by changing behavioral options and expectations (Caspi, Elder, & Herbener, 1990; Elder, 1985). Long-term patterns of action—for instance, criminal involvement—are described as trajectories, with discrete short-term events (e.g., employment) regarded as transitions that occur within a trajectory. Not all transitions are necessarily determined by a person's age, but one task of the life-course theorist is to describe the expected sequence of important transitions and to elucidate their consequences. Most crucial are transitions of such great magnitude that they create "turning points," in which long-term trajectories are altered. It is through this concept of turning points that the impact of victimization on offending may be viewed as an age-graded transition. That is, victimization is an event whose effects may differ according to age, taking on more personal and social significance.

Sampson and Laub's version of life-course theory indicates possible transitions and turning points (Laub & Sampson, 2006; Sampson & Laub, 1993). Their theory emphasizes the important role of social relationships with respect to criminal involvement, and offers explanations of how the transition from adolescence to adulthood can reconfigure these relationships. Whereas problematic behaviors and experiences in childhood can initiate a pattern of cumulative disadvantage that leads to lifelong involvement in crime, adulthood presents new opportunities for integrating into society that, if grasped, can foster significant individual change. The person who acquires and maintains these new ties with society will, as adults, value them more and avoid activities that would put them at risk. Thus, one would expect not only for new social bonds to emerge in adulthood, but also that the effects of social bonds in deterring antisocial behavior would intensify. Over the past two decades, an impressive degree of empirical work shows that these adult-specific social bonds (e.g., work, marriage, military service) can account for some of the reductions in crime that occurs in adulthood (e.g., Benson, 2002; Horney, Osgood, & Marshall, 1995; Laub & Sampson, 2006; Warr, 1998; Wright, Carter, & Cullen, 2005). This work has been conducted on a variety of high-risk and population-based samples (e.g., Horney et al., 1995).

Furthermore, the research literature describes victimization as a turning point that can have significant consequences for various future life outcomes at multiple stages of the life course. Although the precise mechanism for this link is unclear, Hagan (1989) described how the power imbalance in a victimization incident can have implications for the self-concept. In particular, victimization compromises feelings of safety, trust in others, and

freedom of action as well as respect (Anderson, 1999). Following Anderson's model, victimized children in areas where crime is endemic often lack a strong pro-social support network and therefore adopt a violent persona and engage in retaliatory behavior in an effort to deter later attacks. Perhaps as another protective action, victimized youth are more likely to join gangs, and this can create additional inducements for them to engage in criminal activity (Esbensen et al., 2010). Thus, in the short-term, this model predicts a perpetual cycle where youthful victims take protective actions that actually increase their probability of future crime and ultimately, may also increase their odds of subsequent victimization (Singer, 1981; Stewart, Schreck, & Simons, 2006). And in the long-term, victimization events inhibit the formation of conventional ties to society and facilitate higher rates of offending for many years thereafter. Following Sampson and Laub's (1993) life-course model, victimization is thus plausibly conceptualized as a sociogenic process that initiates and sustains a pattern of negative experiences, including criminal activity.

National survey data nevertheless consistently report that incidents of victimization begin to decrease in frequency throughout adulthood (Bureau of Justice Statistics, 2008), suggesting that the transition to adulthood introduces changes that may soften or perhaps even terminate the cyclical pattern described earlier. While childhood victimization might undermine self-concept, weaken ties to society, and elevate criminality for decades thereafter, the emergence of strong relationships with society in adulthood can produce a significant change in one's own perspective. Indeed, as noted earlier, scholars have speculated that victimization events in adulthood create incentives to *desist* from criminal activity (Laub & Sampson, 2006; Lauritsen & Laub, 2007). Ethnographic research on former adult offenders frequently implicates a growing fear of victimization and its impact on the happiness of loved ones as a reason for desistance. Offenders described victimization as a "shock" (Cusson & Pinsonneault, 1986). Carlsson's (2013) interview with one offender specifically highlights how victimization takes on new meaning in the presence of strong adult social relationships:

> I stopped [crime] completely when I met Jane. [She showed] me that "hell you're a grown up, you have children now . . ." But then, also, I thought like "hell, what the hell am I doing? I might die or somebody might sneak up on me or . . ." I couldn't live like that anymore and at the same time be responsible for someone else . . . (p. 677)

Social-psychological theories of exchange also expect that the informal costs of victimization are likely to deter individuals from engaging in

deviant behavior; these assorted costs emerge in the form of respectability, status, and attachment; all of which are generated in voluntary social relationships with others (Berg, 2012).

Researchers have also established that strong and durable social bonds with others generally protect people from being *targeted* by offenders. While this logic clearly applies to adolescents, to the degree that these relationships become more salient and protective against future victimization in adulthood, they may also attenuate the relationship between victimization and offending for adults. The life-course model therefore indicates that the *meaning* of victimization as a source of offending changes over the life course because it is substantially influenced by the growing presence and salience of high-quality adult relationships to institutions and others. In sum, whereas victimization that occurs in *adolescence* is positively associated with criminal activity, the effects of victimization in *adulthood* should be weaker due to the increased presence and influence of strong relationships to other individuals and social institutions.

The Current Study

The criminological research literature makes a plausible case for multiple possibilities regarding stability or variability in the victimization–offending relationship across the life course. An implicit assumption from cross-sectional work conducted at different ages and a limited body of longitudinal studies is that the association is strong and positive at all ages. By contrast, an alternative argument holds that this association is likely to vary at different periods in the life span; either weakening or perhaps becoming increasingly negative. These latter positions derived from the life-course perspective differ in terms of how dramatically the nature of the relationship changes as individuals move into adulthood. However, they share the assumption that age-dependent fluctuations in the victimization–offending association are a function of the growing importance of social relationships concomitant with adulthood.

Altogether the aforementioned literature stipulates at least three competing hypotheses regarding the temporal nature of the victim–offender overlap. First, reflecting the stability argument, we hypothesize that the association between victimization and offending will remain essentially stable and positive across the life course, irrespective of age-graded changes in social bonds. Second, based on an alternative line of reasoning consistent with the life-course perspective, we hypothesize that although victimization will have a strong positive association with offending during adolescence, this association should weaken with age owing to encounters with life-course transitions.

More specifically, the formation of adult social bonds and institutional attachments will insulate individuals from the potential criminogenic consequence of victimization events. The third hypothesis, a variation of the life-course perspective derived from qualitative research and strands of sociological theories, postulates that victimization becomes an informal catalyst for prosocial change among adults (but not children nor adolescents), leading to eventual desistance from criminal behavior. Consequently, the victimization–offending association should become negative as individuals traverse into adulthood and forge adult roles as well as durable social relationships.

To examine these three possibilities, we first model whether the relationship between victimization and offending is characterized by stability or change as individuals move between adolescence and early adulthood. We then examine if the introduction of measures of social bonds are able to explain the victimization–offending association and any age-related variation in that association. In the next section, we describe the specific data, measures, and method that are used to implement these procedures and test the hypotheses stated above.

Data and Methods

Data

Data for the current research are from the Pathways to Desistance project. The Pathways study is a longitudinal investigation of individuals making the transition from adolescence to young adulthood during the period between 2000 and 2010 (see Schubert et al., 2004). Respondents in the study included 1,354 individuals who were convicted of a serious crime in either the juvenile or adult courts in Maricopa County, Arizona (n = 654) or Philadelphia, Pennsylvania (n = 700). Youth from each site were identified for potential enrollment if local court files indicated they had been adjudicated delinquent or deemed guilty of a serious offense. To increase the heterogeneity of the offenders in the sample, the number of males adjudicated for minor drug offenses was limited to 15% of the sample. Altogether, the sample represents around "one in three adolescents adjudicated on the enumerated charges in each locale during the study period" (Loughran, Paternoster, Piquero, & Pogarsky, 2011, p. 1043). At the time of the referring offense or baseline period, the study participants were between the ages of 14 and 17 years. Approximately 86% of respondents were male, 41% of the sample identified as African American, 34% as Hispanic, and 31% as White.

Youths who agreed to participate and whose parents gave consent were then asked to complete a baseline interview. Subsequent interviews with the

respondents were scheduled at 6, 12, 18, 24, 30, 36, 48, 60, 72, and 84 months past the baseline. Participation rates in the follow-up periods remained above 90%, suggesting rather low rates of attrition especially for a longitudinal study of young offenders. Approximately 2% of participants stopped participating in the study and another 2.5% died. We rely on data obtained in the 10 follow-up surveys, yielding a panel data set with 13,540 observations (n = 1,354 individuals × T = 10 time points).[1]

Dependent Variable

Our analysis uses a 20-item "variety" *offending index* from the Self-Reported Offending (SRO) scale as our dependent variable (see Huizinga, Esbensen, & Weihar, 1991). For each wave, the variable is created by summing 20 dichotomous items that indicate whether the respondent participated in a particular offense during the recall period. The items used cover a range of criminal acts that include serious violence (e.g., robbery, assault, sexual assault) and property offending (e.g., shoplifting, breaking and entering, and vandalism). The summed scores on this index range between 0 and 19, with mean of 1.3. To reduce the skew, we transform the original scores using a square root transformation.[2]

Independent Variables

Victimization and age. Our measure of criminal victimization is taken from an adaptation of the "exposure to violence" (ETV) inventory (Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998). We obtain measures referring to whether the respondent reported direct experience in the past 6 months with six specific forms of violent victimization that include threats, sexual assault, assault with a weapon, assault, and being chased in a way that created fear of serious injury. Scores on the victimization variable (M = .19) range between 0 (no experience of any victimization types) and 6 (experienced all types of victimization). To determine how age affects offending and the strength of the association, we also include a measure of the subject's *age* in years at the time of the interview date (M = 19). To account for possible nonlinearity in the effects of age, we also include a quadratic-term, *age-squared*.

Social bonds. Measures that address several dimensions of social bonds are included in the analysis. Four of these assess relationships with friends, romantic partners, and families. Specifically, we use a measure of the quality of the respondents' friendships or *friendship quality*. This variable is adapted

from the Quality of Relationships Inventory (see Pierce, 1994). The Pathways to Desistance project investigators constructed the variable by averaging 10 items that pertain to relationships with the respondent's five closest friends. For example, items ask whether respondents can count on their friends for help with a problem, and how much they depend on their friends to meet material and social needs. Potential responses to each item are scored on a 4-point Likert-type scale, with higher scores reflecting greater friendship quality ($M = 2.8$). Note that respondents who report having no friends in the recall period are coded as zero on the friendship quality measure. The item has high internal consistency across the follow-up periods ($\alpha > .80$).

We also include a measure assessing characteristics of respondents' romantic relationships, labeled *romantic quality/monitoring.* Specifically, it addresses whether respondents' romantic partner has knowledge of their behaviors and involvement in illicit activities. The respondent's romantic partner is the referent for a series of questions regarding the respondent. For instance, respondents are asked, (e.g., "How much does [Name] know who you spend time with?" The variable is the average of five Likert-type scale items ranging from *doesn't know at all* to *knows everything*.). For our purposes, individuals who report having no romantic partner in the recall period are coded as 0. Higher scores on this measure reflect increasing levels of monitoring/knowledge of behavior between romantic partners ($M = 1.66$). To assess the family social bond, we include dichotomous measures of whether the respondent *has a child/children* ($M = .31$) and whether their child or step-child is *living in their household* ($M = .11$). Respondents without children (biological or step) receive a score of 0 on the latter variable. Two employment-related variables are used to assess and commitment to employment. A measure of *importance of job success* is assessed with a variable constructed from a question that asks "How important is it for you to have a good job or career?" Responses range from 1 "not at all important" to 5 "very important" ($M = 4.6$). In addition, we utilize a measure of *involvement in work* that counts the total number of weeks the respondent worked in the community during the recall period including both "on the books" and "under the table" jobs ($M = 10.41$ weeks).[3]

A pair of variables assesses the degree to which respondents are involved in or attached to their communities. Specifically, we include a *community involvement* measure that counts the types of structured community activities (sports teams, scouts, church activities, and volunteer work) a respondent participated in during the recall period (see Elliott, 1990). A score of one was given for each activity in which they participated; the scores were summed across domains ($M = .16$). Respondents not able to participate in such activities due to institutionalization were assigned scores of 0 in our

analysis. About 13% of the sample reported participating in one or more of these activities during the recall period. Next, we assess respondents' connectedness to the community with a *social capital* construct computed as the mean of eight items which assess both intergenerational closure, for example, "How many of the parents of your friends know your parents?" and integration, for example, "How many of your teachers do your parents know by name?" Responses to the individual items are coded on a 4-point scale that varies from 1 (*none*) to 4 (*most*). The mean on the social capital variable is 1.86; the internal consistency of the eight items across the data waves is above .70 according to the analysis reported by the Pathways investigators. Higher scores indicate greater social capital.

Finally, to assess dimensions of the social bond of commitment, we include a measure of *moral disengagement*, which is derived from an inventory assessing respondents' attitudes regarding the appropriate treatment of others in society (see Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). The variable is constructed as the average of 32 items such as "slapping and shoving others is just a way of joking," "teasing someone does not really hurt them," "if kids fight and misbehave in school it is their teacher's fault," and "some people deserve to be treated like animals." The responses on the original items are coded on a Likert-type scale, with higher scores reflecting greater agreement with statement or greater moral detachment; responses to the items are averaged into a summary index (M = 1.46). Analysis by the Pathways investigators indicates the variable exhibits high internal consistency from the baseline waves onward through the follow-up waves ($\alpha > .90$; Shulman et al., 2011).

Control measures. We include several control variables to account for the potential explanatory role of individual traits, amount of time institutionalized, probation/parole status, and usage of alcohol. An *impulsivity* construct is measured by a five-item Youth Impulsiveness Scale taken from the Psychopathic Traits Inventory (PTI; Andershed, Kerr, Stattin, & Levander, 2002). Original answers to the items (e.g., "I consider myself as a pretty impulsive person") were scored on a 4-point Likert-type scale ranging from 1 (*does not apply at all*) to 4 (*applies very well*). The construct's internal consistency (α) is above .70 across follow-up periods. Higher scores indicate greater levels of impulsivity. Next, the *self-reliance* scale (M = 3.74) is based on the average of 10 Likert-type scaled items from the Psychosocial Maturity Inventory (PMI; Greenberger, Josselson, Knerr, & Knerr, 1974) that capture respondents' feelings of internal control and the ability to make decisions independently (e.g., "luck decides most things that happen to me"). The self-reliance variable is a subscale derived from the full PMI inventory; prior

analysis suggests it demonstrates strong item consistency across follow-up waves ($\alpha > .80$). Higher scores indicate greater self-reliance. The variable *time locked-up* measures the amount of time that the respondent is institutionalized during the recall period ($M = .30$). It is computed as the proportion of the recall period for which the respondent is confined to a setting lacking community access. The measure of *probation/parole* is a dummy variable that indicates whether the respondent was on probation/parole during the recall period (40.5% = "yes"). Finally, the measure of *alcohol use* reflects how often during the recall period the respondent drank five or more alcoholic drinks. Responses range from 1 "not at all" to 9 "every day" ($M = 2.13$).

Analytic Method

To examine the victimization–offending relationship and how it may change within-individuals as they age, we utilize a correlated random-effects tobit regression model (see Wooldridge, 2002).[4] The correlated random-effects model (elsewhere described a "hybrid" model, for example, see Allison, 2005) is implemented by dividing the variation in our independent variable measures into respective within- and between-person components and including both in our models. In the context of our interest in how the effects of victimization vary by age (i.e., age-interaction effects), the tobit estimator is useful because relative to traditional linear regression estimators, it better handles the floor effect that is often observed in the distribution of SRO scales. This is important because prior work suggests that "spurious" interaction effects may be observed when linear models are used to model highly skewed multi-item measures of SRO (Osgood, Finken, & McMorris, 2002).[5] Using this estimation approach, we construct our models across four steps. To gain an initial "baseline" estimate of the victimization–offending relationship and whether it varies by age, we first regress the measure of total offending on criminal victimization, age, and the victimization-by-age interaction effects. In the second step, we introduce our control variables to gauge whether any of the victimization–offending relationship is due to variations in individual characteristics, time incarcerated or alcohol use. Next, we add the measures of social bonds (along with all controls) to determine if the association between offending and victimization is explained, in part or full, without the necessity of age-related processes. In the final model of the analysis, we add age-by-social bonds interaction effects. These interaction terms allow the effects of social bonds to vary by age, which addresses the validity of the life-course perspective assumption that age-related variation in the magnitude of the victimization–offending relationship could occur if the effects of social bonds on offending are age-varying.

Results

The first model of Table 1 presents the initial estimate of the victimization–offending relationship as well as an estimate of the extent to which that relationship varies along with the age of the respondent. As expected, we find evidence of significant positive within-individual association between victimization and offending. That is, individuals who experienced temporal increases in victimization also tend to exhibit increases in the offending measure as well. We mean-centered the age variable so that the "main effect" of victimization shown in Model 1 gives an estimate of the victimization–offending relationship at average age—approximately 19 years. Its coefficient implies that a unit increase in victimization index is associated with an increase of .426 units on the square root of the offending variety index. However, contrary to the findings reported in Lauritsen et al. (1991), the evidence here suggests that the victimization–offending relationship *varies significantly* as a function of individual age. Thus, we do not find support for the stability hypothesis which predicts a basically invariant positive relationship across the life course. Specifically, the victimization-by-age interaction term is significant and negative. The negative coefficient implies that with each additional year of age, the effect of victimization on the latent offending measure decreases by .015 units. Moreover, the victimization-by-age^2 interaction term is also negative and marginally significant, with a p value less than .10. Thus, the evidence from this model indicates that the victimization slope is notably steeper at younger age ranges and becomes increasingly flattened as individuals move into their early to mid-20s.[6]

Figure 1 depicts the changing magnitude of the victimization slope at differing ages as implied by the Model 1 estimates. Looking at the figure, we see that the slope effect is steepest among 14-year-olds, is weaker or less steep among 20-year-olds and continues to decline thereafter. By the time youth are age 26, the victimization slope effect is at its weakest, reflecting the declining magnitude of the association. It should be noted, however, that across all years observed, the victimization–offending association remains positive. These results are most supportive of our second hypothesis, which suggests that the victimization–offending association weakens with age, but remains positive in direction. The evidence does not support our third hypothesis, which contends that the victimization–offending relationship would be negative as individuals traverse into adulthood. In the second model of Table 1, we add the control variables: impulsiveness, self-reliance, time spent institutionalized, probation/parole status, and alcohol use. Several of these variables have significant relationships with the measure of total offending. Specifically, increasing scores on impulsivity and alcohol use are all associated with

Table 1. Correlated Random-Effects Tobit Model Predicting Square Root Offending Variety Index: Within-Person Measures.

	Model 1	Model 2	Model 3	Model 4
Within-person measures	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Victimization	0.426*** (0.016)	0.375*** (0.015)	0.353*** (0.015)	0.352*** (0.015)
Age	−0.044*** (0.004)	−0.043*** (0.004)	−0.029*** (0.005)	−0.025*** (0.005)
Age^2	0.004** (0.001)	0.003* (0.001)	0.003* (0.001)	0.002 (0.002)
Impulsivity		0.032*** (0.003)	0.025*** (0.003)	0.025*** (0.003)
Self-reliance		−0.067*** (0.019)	−0.020 (0.019)	−0.019 (0.019)
Time locked up		−0.017 (0.024)	0.127*** (0.031)	0.111*** (0.031)
Probation/parole		0.089*** (0.017)	0.050** (0.017)	0.052** (0.017)
Alcohol use		0.087*** (0.004)	0.082*** (0.004)	0.081*** (0.004)
Friendship quality			0.005 (0.007)	0.003 (0.007)
Romantic quality-monitoring			0.028*** (0.005)	0.028*** (0.005)
Importance job success			−0.041*** (0.011)	−0.039*** (0.011)
Weeks employed			−0.003*** (0.001)	−0.003*** (0.001)
Community involvement			0.017 (0.017)	0.021 (0.017)
Social capital			0.088*** (0.010)	0.092*** (0.010)
Has kid(s)			0.042 (0.027)	0.027 (0.029)
Lives with kid(s)			−0.076* (0.034)	−0.108** (0.041)
Moral disengagement			0.406*** (0.029)	0.406*** (0.029)
Victimization × Age	−0.015** (0.005)	−0.015** (0.005)	−0.014** (0.005)	−0.016*** (0.005)

(continued)

Table 1. (continued)

	Model 1	Model 2	Model 3	Model 4
Within-person measures	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Victimization × Age^2	−0.003 (0.002)	−0.003 (0.002)	−0.003 (0.002)	−0.003 (0.002)
Friendship Quality × Age				0.002 (0.003)
Romantic Monitoring × Age				−0.000 (0.002)
Importance Job Success × Age				0.001 (0.004)
Weeks Employed × Age				0.000 (0.000)
Community Involvement × Age				−0.000 (0.007)
Social Capital × Age				0.012** (0.003)
Has Kid(s) × Age				0.016 (0.010)
Lives With Kid(s) × Age				0.008 (0.015)
Moral Disengagement × Age				−0.001 (0.010)
Constant	0.902***	0.857***	0.830***	0.827***
Within-person variance	0.419***	0.381***	0.361***	0.360***
Between-person variance	0.234***	0.148***	0.119***	0.118***
N	11,909	11,909	11,909	11,909

Note. Standard errors in parentheses.
*p < .05. **p < .01. ***p < .001.

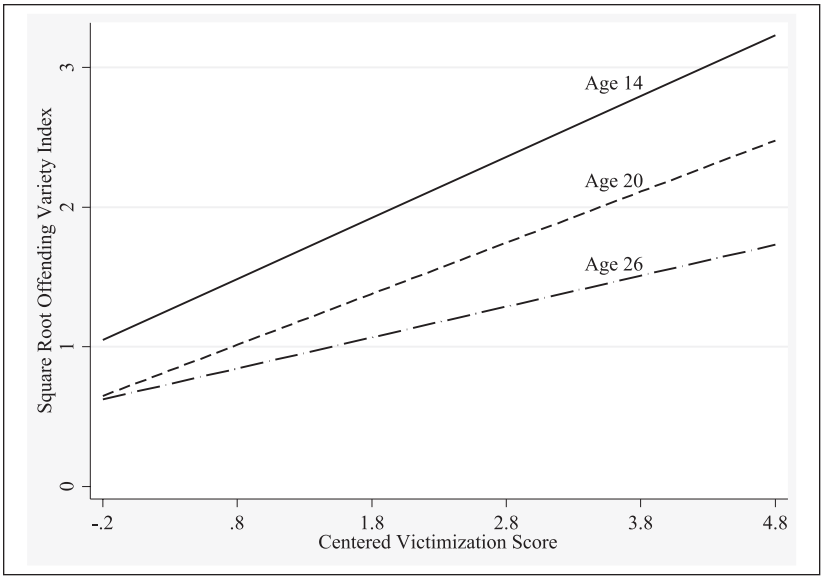

Figure 1. The predicted relationship between victimization and offending at different ages.

increased levels of offending. The evidence indicates that time institutionalized does not materially affect the offending scores, but probation/parole status does. Interestingly, it appears that individuals score higher on the offending measure in recall periods in which they are on probation/parole compared with when they are not. Most important for current objectives, we find that controlling for these variables has limited impact on the victimization–offending association or on the estimate of age-related variation in that association. The main effect of victimization decreases somewhat (from .426 to .375), whereas the regression coefficient for the victimization-by-age interaction effect remains stable across Models 1 and 2.

The third model in Table 1 adds measures of social bonds into the regression equation. If controls for social bonds reduce the victimization–offending relationship sharply toward zero, this would largely obviate the need for a life-course approach—the presence of social bonds at any age would explain away the effects of victimization on criminality. Quite contrary to that expectation, the results in Model 3 suggest a limited impact of our measures of social bonds on the victimization–offending relationship. Whereas four social bond measures—importance of job success, weeks employed, lives with children, and moral disengagement—have the theory-expected negative relationship with

scores on the total offending index, the measures of friendship quality and community involvement are not significantly related to offending. More puzzling, we find that the measures of romantic quality and social capital have significant positive (i.e., opposite of expectations) associations with the offending measure. That is, increases in romantic connectedness and increases in intergenerational closure and social integration are associated with higher, not lower, scores on the measure of offending. Altogether, the inclusion of these variables results in a small reduction (roughly 6%) in the victimization slope (i.e., the "partial effect"). However, accounting for these variables again has limited impact on the estimate of age-related variation in the victimization–offending association, with the interaction term coefficient decreasing only slightly from .015 to .014. These results indicate that the association between victimization and offending is not substantially a by-product of age-related changes in the levels of conventional social bonds.

In the final model, we add interaction terms that allow the *effects* of each of the social bond measure to vary by age. From a life-course theory perspective, age-related variation in the victimization–offending association is expected and explainable if the underlying mechanism by which victimization affects offending differs in quality or magnitude at different points in the life course. Modeling age-related variation in the effects of the social bonds therefore enables us to assess that argument. According to the results of the current model, age-related variation in the effects of social bonding variables do not explain why we observed attenuation of the victimization slope at the higher age ranges. The effect of a single social bond measure—social capital—varies significantly by age. But the direction of the product term coefficient is contrary to expectations. Moreover, none of the social control–age interaction effects shares meaningful variation with the age-related variation in the victimization–offending relationship. This is evidenced by the fact that neither the estimate of the main effect of victimization nor the estimate of its age-interaction effect is materially altered when we account for the age-by-social bond interactions.

Discussion

Altogether, the results reported in Table 1 appear to convey three key patterns. First, as is commonly reported in the research, there is strong evidence supporting the existence of a significant and positive within-person association between victimization and offending. Nevertheless, second, contrary to the stability perspective espoused in some prior work, we find evidence of age-related variation in the magnitude of the victimization–offending association. Specifically, the association systematically declines

in intensity as individuals move from early adolescence to early adulthood. This indicates that some age-related process is transpiring which yields a weakening of the association. But there is no evidence to suggest that social bonds and institutional attachments effectively explain the basic victimization–offending association or changes in its magnitude as people age into early adulthood. Third, neither do our results provide any support to the idea that changes to social bonds compel people who were victimized to desist from criminal behaviors. Although we found evidence that the victimization–offending association generally weakens as individuals enter early adulthood, we did not see any support for the hypothesis that the association becomes negative during the adult years. Moreover, our results suggest that processes other than the social relationships measured in our study are responsible for age-related changes in the victimization–offending association.

The possibility that victimization and offending reciprocally influence one another could raise questions regarding the results from these analyses, which situate victimization as an exogenous predictor of offending. To address possible endogeneity, we conducted a supplemental analysis with the Arellano–Bond generalized methods of moments (GMM) instrumental variables estimator. This method is well-suited to small-*T*, large-*N* panel data where one or more explanatory variables are not "strictly exogenous," meaning correlated with prior and perhaps current manifestations of the error term (for a more extended discussion of this model, see Ousey, Wilcox, & Brummel, 2008). Using available lags of the endogenous regressor variables as instruments, the Arellano–Bond model is useful because it yields a consistent estimate of the effect of the endogenous regressor (i.e., victimization) on the dependent variable (offending). Results from two Arellano–Bond models are presented in the appendix. The first model provides baseline estimates of the age variation in the effects of victimization on offending, akin to those reported in Model 1 of Table 1. The second model is the fully specified model, which includes all social bond variable-by-age interaction effects, similar to that reported as Model 4 in Table 1. In general, the Arellano–Bond regression models yield results that are consonant with those discussed earlier. Most notably, the analyses again show that the average effect of victimization on offending is significant and positive, but it decreases with age. Moreover, as was also true in the analyses reported in Table 1, there is little indication that social bonds or age-graded variation in social bonds can account for either the victimization–offending association or the attenuation of that association with age. Altogether, models controlling for potential endogeneity largely reiterate the results and conclusions suggested by the earlier analyses.[7]

Conclusion

Victimization is among the strongest predictors of offending in the criminological literature. And the question of how victimization experiences shape criminal behavior has become a defining feature of recent developments in criminological theory and research (see Pratt et al., 2014). A review of the research fosters the expectation that victimization and offending are positively related, and that this relationship does not change across the life course. Life-course criminologists and ethnographic researchers, however, have proposed that victimization and offending may not always be positively related across the life span. Whether victimization in fact matters less as a cause of adult offending than for childhood delinquency (and, if so, why) is so far unknown, largely due to the limited availability of within-individual longitudinal data that can supply the necessary combination of theoretically relevant measures. The objective of the current research was to use the life-course approach and assemble plausible theoretical explanations for how the victimization–offending association might behave over the life course, and test them against data from a large sample of young offenders followed into adulthood.

We began by positing what is known as a stability hypothesis; then our theoretical starting-point centered on the possible role of social relationships or social bonds. We described two competing arguments about how these relationships might influence the victimization–offending association through the life course. The first posits that although victimization is a generally adverse turning point that can worsen offending, this relationship is expected to gradually weaken with age as a result of the varied pro-social relationships that emerge as individuals transition to adult social relationships. The second possibility suggests more dramatic changes; specifically, that victimization becomes associated with desistance from crime as individuals move into adulthood. Again, the research literature implicates social relationships as being of key importance here: Offenders who form strong bonds as adults have more to fear from victimization—there are greater personal costs, and so they gradually choose to desist from law-breaking to lessen their exposure to victimization risk.

The results showed that the strength of the victimization–offending association does indeed decrease significantly with age. Victimization is most strongly related with offending when a person is younger, but the association becomes less strong as a person grows older. The results are thus more consistent with theories that allow victimization to have a more pronounced influence on offending in adolescence than in adulthood, such as life-course theory. The results also indicate that research on the victimization–offending

association that does not specifically consider within-individual changes in behavior are likely to *overestimate* the stability and strength of the positive relationship between offending and victimization across different ages. Regardless, an important finding discovered here is that our results showed that the victimization–offending association remained *positive* across all ages that we were able to observe. We found no evidence that victimization leads to desistance from crime in the developmental periods under consideration.

Contrary to expectations, however, indicators of the presence and quality of social relationships failed to account for the decreasing magnitude of the victimization–offending association. Neither did they affect the speed at which this decrease occurred. In other words, the effect of victimization on crime weakened with each passing year irrespective of how strongly bonded someone was to family or work, and regardless of any age-related changes in the effects of social bonds. These findings do not preclude the possibility of a life-course explanation for the gradual decoupling of victimization and offending, but they indicate that age-graded changes in social relationships, at least as measured herein, may not be the answer.

There are alternative theoretical directions that may deserve consideration, although these are offered only as plausible starting-points given the dearth of relevant theory and research. For instance, life-course explanations might turn to subcultural processes that govern the nature of the connection between victimization and subsequent criminal behavior across periods of the life course (e.g., Stewart et al., 2006). In this case, ethnographic work conducted with offenders takes on added value so far as locating these cultural mechanisms (e.g., Anderson, 1999; Cusson & Pinsonneault, 1986). Another possibility is that the lessened impact of victimization on offending may occur simply because of human biological and psychological development simultaneously affecting both—or maturational reform (Hirschi & Gottfredson, 1995). If this is true, no sociogenic concept or process will supply an adequate explanation—hence, the victim–offender overlap will decrease in magnitude over the life course irrespective of cultural milieu, matrimonial situation, parenting status, or employment circumstances. It could also be the case, however, that psychological mechanisms such as hostile attribution bias or neuropsychiatric disorders hold value as explanatory mechanisms (see Loeber et al., 1999); still, their particular effects on age-related changes has not yet been theoretically elucidated. Our findings identify some stability in the sense that the association between offending and victimization remains positive. This may be viewed by some as consistent with self-control theory and its emphasis on the *relative stability* of antisocial propensities across time (see

Gottfredson & Hirschi, 1990). For that reason, perhaps further testing of the implications of self-control theory for these longitudinal patterns is also warranted. Comparative research using within-individual panel data collected from diverse cultural contexts could also provide clarity about the importance of natural development. Future work on the connection between victimization and offending may profit from developing and testing these possibilities.

A very important caveat is that the Pathways to Desistance data do not allow us to isolate parent-inflicted violence from non-family incidents across successive waves of adolescence and early adulthood. For example, as subjects get older a greater share of their offending and victimization experiences may be of a domestic or intimate nature. Future data collection efforts should thus attempt to capture these important experiences. The Pathways data also consist exclusively of offenders followed from youth to their late 20s, which imposes limits on comparisons to subgroups of the general population. Perhaps during this period, the assorted age-graded transitions become more salient to identity and aspects of social well-being (Elder, 1985). It would thus be unclear if we would find different effects for people in their 50s and 60s. However, prior work has found that the connection between theorized social processes and criminal activity were very similar for participants in their 70s as in their early 30s (see Sampson & Laub, 2003).

In conclusion, whereas the positive association between victimization and offending is generally regarded as an established "criminological fact," our results suggest that this *fact* has contours that warrant explanation. Our measurement of life-course theory was unable to successfully explain these temporal contours. Theorists and researchers are thus faced with the task of developing new explanations, so that we can better understand not only why the victimization–offending association exists but also why it may change across the life course.

Appendix

Arellano–Bond "Difference GMM" Regression Model Treating Victimization as Endogenous Predictor of Square Root Offending Variety Index.

	Model 1	Model 2
Within-Person Measures	*B* (*SE*)	*B* (*SE*)
Square root offending$_{t-1}$	0.119*** (0.021)	0.094*** (0.019)
Square root offending$_{t-2}$	0.053*** (0.014)	0.042** (0.013)
Victimization	0.571*** (0.125)	0.539*** (0.120)

(continued)

Appendix (continued)

	Model 1	Model 2
Within-Person Measures	*B* (*SE*)	*B* (*SE*)
Age	0.044 (0.030)	0.036 (0.019)
Age^2	0.005* (0.002)	0.003 (0.002)
Impulsiveness		0.020*** (0.003)
Self-reliance		–0.003 (0.020)
Time locked up		0.070 (0.036)
Probation/parole		0.022 (0.019)
Alcohol use		0.070*** (0.006)
Friendship quality		–0.001 (0.007)
Romantic quality-monitoring		0.023*** (0.005)
Importance job success		–0.027* (0.012)
Weeks employed		–0.004*** (0.001)
Community involvement		0.017 (0.019)
Social capital		0.079*** (0.013)
Has kid(s)		0.008 (0.032)
Lives with kid(s)		–0.037 (0.041)
Moral disengagement		0.275*** (0.033)
Victimization × Age	–0.121* (0.060)	–0.125* (0.060)
Victimization × Age^2	0.015 (0.016)	0.012 (0.016)
Friendship Quality × Age		0.002 (0.003)
Romantic Monitoring × Age		–0.001 (0.003)
Importance Job Success × Age		0.010 (0.005)
Weeks Employed × Age		0.001 (0.001)
Community Involvement × Age		0.007 (0.009)
Social Capital × Age		0.010* (0.004)
Has Kid(s) × Age		0.010 (0.011)
Lives With Kid(s) × Age		0.001 (0.014)
Moral Disengagement × Age		0.014 (0.014)
N	7,465	7,465
Arellano–Bond test of AR(2)	–1.47	–0.74
Sargan test of overidentification restrictions (93 *df*)	107.47	111.71
Diff. in Sargan: Instrument exogeneity (victimize, 63 *df*)	71.35	69.46

Note. Standard errors in parentheses. GMM = generalized methods of moments.
"Excluded" instruments, victimization: lags 4 and deeper of victimization variable.
"Excluded" instruments, square root of the offending index: lags 2 and deeper of square root offending index.
*p < .05. **p < .01. ***p < .001.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. For additional information on the scientific development of study constructs and prior research using them, please see the Pathways to Desistance project website (http://www.pathwaysstudy.pitt.edu/codebook/constructs.html). Descriptive data for all measures are available from the authors on request.
2. Alternatively, researchers can measure victimization using simple frequency counts; however, there are noteworthy defects (e.g., Farrington, 1973; Hindelang, Hirschi, & Weis, 1981). Recently, researchers have established that multi-item variety indexes can alleviate many of the shortcomings of frequency counts (see, for example, Osgood, McMorris, & Potenza, 2002; Sweeten, 2012). These researchers noted that most counts of offenses and victimization, even among offender populations, are heavily influenced by the least serious offenses. Variety indexes, in contrast, deemphasize minor offending and thus provide a more general index of underlying "criminality."
3. The variable does not differentiate between the types of job the respondent held during the weeks they were employed.
4. The correlated random-effects model mitigates one of the limitations of using an offender sample, where subjects were recruited because of their offending (rather than victimization), thus making the temporal sequence of victimization and offending difficult to establish. As the Pathways data contain no information on victimization prior to the baseline wave, we use a statistical model that estimates the impact of time-varying covariates of offending, like victimization and social bonds, after the effects of individual-specific time-stable factors have been removed (see Allison, 2005). These include, but are not limited to personality traits, genetic makeup, and time-stable aspects of the social environment—all of which are linked with victimization. Although the data do not contain direct measures of victimization prior to the baseline, the statistical method imposes a strong proxy for the association between prior victimization and "initial" offending. Thus, the victimization–offending association reported in the analyses should reflect the time-specific relationship between these processes rather than an artifact of unmeasured prior victimizations, offending, or any other time-stable risk factor.
5. Our general conclusion regarding the victimization–offending relationship and age-related variation in the magnitude of that relationship are unchanged when the measure of offending is untransformed or when it is converted into a

logarithmic scale. Likewise, the substantive findings remain similar if we use a fixed-effects linear model rather than the correlated random-effects tobit model. Yet, as one would expect given the results in Osgood, Finken, et al. (2002), the interaction effects appear more powerful and have lower *p* values when we use the linear regression estimators and when the dependent variable is left in its untransformed (and highly skewed) form.

6. The between-person effects from each model are not reported in Table 1 to conserve space and because they are not directly relevant to the research hypotheses. Moreover, as Allison (2005) noted, these effects are likely confounded by unmeasured, time-stable variables. For those interested, tables of the between-person coefficients are available by request.
7. To further establish the robustness of our findings, we included baseline scores for offending. Specifically, controlling for initial offending allows us to determine whether the findings are distinct to differences in the quality of offending and thus specific to serious (violent) offenders. Controlling for initial offending did not affect our findings. In the interest of brevity, the tables for this analysis are not presented; however, they are available from the authors on request.

References

Agnew, R. (2002). Experienced, vicarious, and anticipated strain. *Justice Quarterly*, *19*, 603-632.

Allison, P. D. (2005). *Fixed effects regression methods for longitudinal data analysis using SAS*. Cary, NC: SAS Institute.

Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: A new assessment tool. In E. Blaauw & L. Sheridan (Eds.), *Psychopaths: Current international perspectives* (pp. 131-158). The Hague, The Netherlands: Elsevier.

Anderson, E. (1999). *Code of the street: Decency, violence, and the moral life of the inner city*. New York: Norton.

Averdijk, M. (2010). *Individuals' victimization patterns over time*. Amsterdam, The Netherlands: Free University.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology*, *71*, 364-391.

Benson, M. (2002). *Crime and the life course*. Los Angeles, CA: Roxbury.

Berg, M. T. (2012). The overlap of violent offending and violent victimization: Assessing the evidence and explanations. In M. T. DeLisi & P. J. Conis (Eds.), *Violent offenders: Theory, research, policy, and practice* (pp. 17-38). Burlington, MA: Jones & Bartlett Press.

Berg, M. T., & Loeber, R. (2011). Examining the neighborhood context of the violent offending-victimization relationship: A prospective investigation. *Journal of Quantitative Criminology*, *27*, 427-451.

Bureau of Justice Statistics. (2008). *Criminal victimization, 2007*. Washington, DC: Office of Justice Programs.

Carlsson, C. (2013). Masculinities, persistence and desistance. *Criminology*, *51*, 661-693.

Caspi, A., Elder, G. H., & Herbener, E. S. (1990). Childhood personality and the prediction of life-course patterns. In L. Robins & M. Rutter (Eds.), *Straight and devious pathways from childhood to adulthood* (pp. 13-35). Cambridge, UK: Cambridge University Press.

Cusson, M., & Pinsonneault, P. (1986). The decision to give up crime. In D. B. Cornish & R. V. Clarke (Eds.), *The reasoning criminal: Rational choice perspectives of offending* (pp. 72-82). New York, NY: Springer-Verlag.

Daigle, L. E., Beaver, K. M., & Hartman, J. L. (2008). A life-course approach to the study of victimization and offending behaviors. *Victims and Offenders*, *4*, 365-390.

Elder, G. H. (1985). Perspectives on the life course. In G. H. Elder (Ed.), *Life course dynamics* (pp. 23-49). Ithaca, NY: Cornell University Press.

Elliott, D. S. (1990). *National Youth Survey*. Boulder: Institute of Behavioral Science, University of Colorado.

Esbensen, F. A., Peterson, D., Taylor, T. J., & Freng, A. (2010). Youth violence: Sex and race differences in offending, victimization, and gang membership. Philadelphia, PA: Temple University Press.

Farrall, S., & Calverley, A. (2006). *Understanding desistance from crime: Theoretical directions in resettlement and rehabilitation*. Berkshire, UK: Open University Press.

Farrington, D. P. (1973). Self-reports of deviant behavior: Predictive and stable? *Journal of Criminal Law and Criminology*, *64*, 99-110.

Gottfredson, M. R. (1984). *Victims of crime: The dimensions of risk* (Home Office Research Study No. 81). London, England: Her Majesty's Stationery Office.

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.

Greenberger, E., Josselson, R., Knerr, C., & Knerr, B. (1974). The measurement and structure of psychosocial maturity. *Journal of Youth and Adolescence*, *4*, 127-143.

Hagan, J. (1989). *Structural criminology*. New Brunswick, NJ: Rutgers University Press.

Hindelang, M. (1976). *Criminal victimization in eight American cities*. Cambridge, MA: Ballinger.

Hindelang, M. J., Hirschi, T., & Weis, J. G. (1981). *Measuring delinquency*. Beverly Hills, CA: SAGE.

Hirschi, T., & Gottfredson, M. R. (1995). Control theory and the life course perspective. *Studies on Crime and Crime Prevention*, *4*, 131-142.

Horney, J., Osgood, D. W., & Marshall, I. H. (1995). Criminal careers in the short-term: Intra-individual variability in crime and its relation to local life circumstances. *American Sociological Review*, *60*, 655-673.

Huizinga, D., Esbensen, F. A., & Weihar, A. W. (1991). Are there multiple paths to delinquency? *Journal of Criminal Law and Criminology*, *82*, 83-118.

Jensen, G., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activity theory. *Violence and Victims*, *1*, 85-99.

Laub, J. H., & Sampson, R. J. (2006). *Shared beginnings, divergent lives: Delinquent boys to age 70*. Cambridge, MA: Harvard University Press.

Lauritsen, J. L., & Laub, J. H. (2007). Understanding the link between victimization and offending: New reflections on an old idea. *Crime Prevention Studies*, *22*, 55-75.

Lauritsen, J. L., Sampson, R. J., & Laub, J. H. (1991). The link between offending and victimization among adolescents. *Criminology*, *29*, 265-292.

Loeber, R., & Farrington, D. (2011). *Young homicide offenders and victims*. New York, NY: Springer.

Loeber, R., Wei, E., Stouthamer-Loeber, M., Huizinga, D., & Thornberry, T.P. (1999) Behavioral antecedents to serious and violent juvenile offending: Joint analyses from the Denver Youth Survey, Pittsburgh Youth Study, and the Rochester Development Study. *Studies in Crime and Crime Prevention*, *8*, 245-263.

Loughran, T., Paternoster, R., Piquero, A. R., & Pogarsky, G. (2011). On ambiguity in perceptions of risk: Implications for criminal decision making. *Criminology*, *49*, 1029-1061.

Manning, W. D., Longmore, M. A., & Giordano, P. C. (2007). The changing institution of marriage: Adolescents' expectations to cohabit and to marry. *Journal of Marriage and Family*, *69*, 559-575.

Osgood, D. W., Finken, L. L., & McMorris, B. J. (2002). Analyzing multiple-item measures of crime and deviance II: Tobit regression analysis of transformed scores. *Journal of Quantitative Criminology*, *18*, 319-347.

Osgood, D. W., McMorris, B. J., & Potenza, M. T. (2002). Analyzing multiple-item measures of crime and deviance I: Item response theory scaling. *Journal of Quantitative Criminology*, *18*, 267-296.

Ousey, G. C., Wilcox, P., & Brummel, S. (2008). Déjà vu all over again: Investigating temporal continuity of adolescent victimization. *Journal of Quantitative Criminology*, *24*, 307-335.

Ousey, G. C., Wilcox, P., & Fisher, B. (2011). Something old, something new: Revisiting competing hypotheses of the victimization-offending relationship among adolescents. *Journal of Quantitative Criminology*, *27*, 53-84.

Pierce, G. P. (1994). The quality of relationships inventory: Assessing the interpersonal context of social support. In B. R. Burleson, T. L. Albrecht & I. G. Sarason (Eds.), *Communication of social support: Messages, interactions, relationships, and community* (pp. 247-266). Newbury Park, CA: SAGE.

Pratt, T. C., Turanovic, J. J., Fox, K. A., & Wright, K. A. (2014) Self-control and victimization: A meta-analysis. *Criminology*, *52*, 87-116.

Sampson, R. J., & Laub, J. H. (1993). *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.

Schreck, C. J. (1999). Criminal victimization and low self-control: An extension and test of a general theory of crime. *Justice Quarterly*, *16*, 633-654.

Schreck, C. J., Stewart, E. A., & Osgood, D. W. (2008). A reappraisal of the overlap of violent offenders and victims. *Criminology*, *46*, 871-906.
Schubert, C. A., Mulvey, E. P., Steinberg, L., Cauffman, E., Losoya, S. H., Hecker, T., . . . Knight, G. P. (2004). Operational lessons from the pathways to desistance project. *Youth Violence and Juvenile Justice*, *2*, 237-255.
Selner-O'Hagan, M. B., Kindlon, D. J., Buka, S. L., Raudenbush, S. W., & Earls, F. J. (1998). Assessing exposure to violence in urban youth. *Journal of Child Psychology and Psychiatry*, *39*, 215-224.
Shover, N. (1996). *Great pretenders: Pursuits and careers of persistent thieves*. Boulder, CO: Westview.
Shulman, E. P., Cauffman, E., Piquero, A. R., & Fagan, J. (2011) Moral disengagement among serious juvenile offenders: A longitudinal study of the relations between morally disengaged attitudes and offending. *Developmental Psychology*, *47*, 1619-1632.
Singer, S. I. (1981). Homogeneous victim-offender populations: A review and some research implications. *Journal of Criminal Law and Criminology*, *72*, 779-788.
Stewart, E. A., Schreck, C. J., & Simons, R. L. (2006). "I ain't gonna let no one disrespect me": Does the code of the street reduce or increase violent victimization among African American adolescents? *Journal of Research in Crime & Delinquency*, *43*, 427-458.
Sweeten, G. (2012). Scaling criminal offending. *Journal of Quantitative Criminology*, *28*, 23-557.
Warr, M. (1998). Life-course transitions and desistance from crime. *Criminology*, *36*, 183-216.
Wittebrood, K., & Nieuwbeerta, P. (2000). Criminal victimization during one's life course: The effects of previous victimization and patterns of routine activities. *Journal of Research in Crime & Delinquency*, *37*, 91-122.
Wolfgang, M. E. (1958). *Patterns in criminal homicide*. New York, NY: John Wiley.
Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.
Wright, J. P., Carter, D. E., & Cullen, F. T. (2005). A life-course analysis of military service in Vietnam. *Journal of Research in Crime & Delinquency*, *42*, 55-83.

Author Biographies

Christopher J. Schreck is a professor in the Department of Criminal Justice at the Rochester Institute of Technology. His research centers on the relevance of using criminological theories for understanding the etiology of victimization. He is a past editor of the Journal of Crime & Justice and the Journal of Criminal Justice Education.

Mark T. Berg is an assistant professor in the Department of Sociology at the University of Iowa. His current research focuses on interpersonal violence, the victim-offender overlap, contextual processes, and adolescent health outcomes.

Graham C. Ousey is a professor of Sociology at the College of William and Mary in Virginia. His current research focuses on understanding the confluence of crime and negative health outcomes, and explanations of stability and change in criminal offending and victimization.

Eric A. Stewart is a professor in the College of Criminology and Criminal Justice at Florida State University. He is a W.E.B. DuBois fellow with the National Institute of Justice, a member of the Racial Democracy, Crime and Justice Network, and Vice President of the American Society of Criminology. His research interests include racial inequality and criminal outcomes, crime over the life course, and contextual- and micro-processes that affect adolescent development.

J. Mitchell Miller is a professor in the Department of Criminology & Criminal Justice at the University of North Florida where he specializes in the areas of drugs and crime, criminal justice program evaluation, and qualitative research methods. He is a past president of the Southern Criminal Justice Association and a fellow of the Academy of Criminal Justice Sciences. He is currently conducting mixed methods evaluations of treatment initiatives for dually diagnosed offenders in Louisiana and Tennessee for SAMSHA and BJA, and serving as Editor for Wiley-Blackwell's International Series of Encyclopedias in Criminology and Criminal Justice.