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Gendered Opportunity?

School-Based Adolescent Victimization

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Researchers have shown that criminal opportunity significantly predicts school-based adolescent victimization. However, little is known about the extent to which opportunity for school-based victimization might be gendered. In this study, the authors drew from criminal opportunity and feminist research and extended the principle of homogamy to explore how gender interacts with opportunity and school-based victimization. Data collected from 2001 to 2004 from 10,522 students in 111 middle and high schools throughout Kentucky were used to examine whether indicators of criminal opportunity placed students, particularly girls, at heightened risk for school-based theft and physical assault victimization. The results of gender-specific hierarchical logistic regression models indicated that measures of criminal opportunity were significantly related to theft and assault for both sexes. Equality-of-coefficient tests supported gendered effects for some opportunity indicators, with differences indicating that the effects of risk and protective factors for victimization were heightened for girls.

Keywords: *victimization; opportunity; school crime; gender*

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Despite the downward trend in school victimization when looking at 10-year aggregate trajectories and the rarity of extreme or lethal school violence, "less serious" incidents are still abundant and considered "everyday" occurrences in our nation's schools (DeVoe et al. 2005). Several studies have suggested that *criminal opportunity*, the extent to which offenders and victims or targets come into contact with each other in the absence of capable guardianship, is key in understanding the etiology of school victimization, but much remains unknown (see Campbell Augustine et al. 2002; Garofalo, Siegel and Laub 1987; Schreck, Miller, and Gibson 2003). In particular, research to date has neither explicated nor tested how opportunity may operate differently across gender. The implicit assumption of previous studies, therefore, has been that "opportunity" is a "one size fits all students" concept. We think this assumption deserves empirical study to determine if gendered opportunities for school-based victimization exist.

With the present study, we built on recent etiological work on school victimization in the tradition of criminal opportunity theory but also extended this body of research with an important examination of the possible conditioning effects of gender. More specifically, we explored a "gendered opportunity" approach to school-based victimization by estimating gender-specific hierarchical logistic regression models of school-based theft and physical assault victimization using data from 10,522 students in 7th to 10th grade nested within 111 Kentucky schools.

School Victimization and Criminal Opportunity

Since Garofalo et al.'s (1987) suggestion that school victimization might be best understood as a function of opportunity, the utility of opportunity-based explanations for understanding key correlates of school victimization continues to gain empirical support. Garofalo et al. analyzed narratives regarding adolescent victimizations from 1982 and 1983 National Crime Survey incident reports. Of the 41 percent that contained information on place of victimization occurrence, over half (54 percent) of the juvenile-to-juvenile incidents occurred in school buildings, on school property, or on the way to or from school. Their findings suggested that school-related victimizations were more likely to occur in specific locations outside the view of school personnel (e.g., on the way to and from school) and that student victims tended to rely on teachers and other school personnel for guardianship and social control. Their study thus highlighted the importance of school personnel as potential capable guardians in disrupting the opportunity for student victimization.

Subsequent research has also emphasized the role of teacher-provided guardianship in understanding patterns of school crime and victimization. For instance, Astor, Meyer, and Behre's (1999) interviews with students across five high schools revealed that caring, connected teachers were perceived to be the most effective potential guardians against school violence. In contrast, students expressed ambiguity about the perceived effectiveness of monitoring from police or security guards and electronic devices (Astor et al. 1999). Schreck et al.'s (2003) analysis of the school safety and discipline component of the 1993 National Household Education Survey also revealed the overall ineffectiveness of police or security and electronic target-hardening strategies for the prevention of theft and violent school-based victimization. On the other hand, individual student alienation and the belief that school rules were unfair significantly heightened victimization risk, according to their analysis. Schreck et al.'s interpretation was that alienated students and those who believe in the injustice of school rules might be less inclined to seek the help of school authorities, thus leaving them relatively less guarded and at risk for victimization. They suggested that "hostile attitudes toward school may correspond with the unwillingness on the part of the student to seek help from school authorities or rely on their protection" (p. 478).

The converse, that positive school bonds can foster guardianship, helps interpret findings indicating significant negative relationships between school victimization and (1) student academic achievement (Anderman and Kimweli 1997) and (2) positive attitudes toward and perceptions of school (George and Thomas 2000; Wilcox, May, and Roberts 2006). Prosocial attachments, including attachment to school as well as parental and peer attachments, are relevant to criminal opportunity for adolescent school-based victimization in that such bonds "could serve to constrain the types of activities we routinely engage in and bring individuals into closer proximity to those with an interest or social obligation to act as protectors" (Schreck and Fisher 2004:1024). Collectively, these studies suggest that control in the form of conventional social attachments and commitments is key in understanding school victimization, perhaps more so than social control exerted by police or security staff members and/or electronic security.

Involvement in school activities is another presumed aspect of a strong social bond and effective control. However, its effects on school victimization remain more ambiguous than those of conventional indicators of attachment and commitment. The routine activity research has generally supported the notion that adolescent involvement in structured after-school activities (as opposed to unstructured leisure activities) serves to protect

against delinquent offending (e.g., Osgood, Anderson, and Shaffer 2005), but the implications for structured activities on victimization are less clear. Positive, significant correlations have been shown between adolescent and young-adult victimization and time in both conventional unstructured activities, including "exercise" (Schreck and Fisher 2004), and structured activities, including participation in school sports and other school organizations (Mustaine and Tewksbury 2002) and involvement in "community activities" (Lauritsen, Laub, and Sampson 1992). Lauritsen et al. (1992) concluded that there are few activities in which involvement can serve to protect adolescents from victimization. One plausible interpretation is that although involvement in conventional activities may serve to informally control offending, it also exposes participants and their property to opportunities for victimization. As Felson (1986) observed, "Conventional activities can tie down delinquents, but they can also hamstring potential handlers and guardians. Sometimes they bring offender and target together, assemble accomplices, or facilitate transgressions at proximate times and places, after the adults have gone home" (p. 125).

Even though structured before- and after-school activities are supervised by adults, the relative amount of supervision available can be much less than during normal school hours (i.e., hallways, locker rooms, etc., are typically left unattended while extracurricular activities are ongoing in particular areas of the school or grounds). These activities often involve student exposure to those "unowned places and time" that Astor et al. (1999), Crowe (1990), and others have identified as particularly problematic in terms of school-based victimization. Participation in school sports, for instance, usually involves the storage of belongings in a locker room, shared by many, during practice and game times before or after school; such locker rooms have been shown to be places where students experience the most loss of property (Crowe 1990). In general, personal and property victimization can more easily occur during relatively less supervised, "less owned" before- and after-school hours.

Beyond indicators of social control in the form of social bonding, self-control has been highlighted in several studies as perhaps key in understanding school victimization. Campbell Augustine et al. (2002) found that impulsivity was strongly related (positively) to both violent and property victimization across Kentucky middle and high school student subsamples.[1] They suggested that "the abrasive and noxious behavior that sometimes characterizes those with impulsive personalities" might incite victimization (p. 240). This interpretation is supported by Schreck's (1999) suggestion

that the elements of self-control—including future orientation, empathy, tolerance for frustration, diligence, preference for mental as opposed to physical activity, and risk avoidance—put individuals who possess low levels at increased risk for victimization. Schreck theorized that not only does low self-control make one an antagonist and therefore a suitable target, but it also likely increases exposure to dangerous situations and a neglect of guardianship practices. Subsequent work by Schreck and his colleagues has indicated that low self-control is positively related to general (non-school-specific) adolescent victimization risk, even controlling for risky lifestyle characteristics such as time spent driving around with friends, peer delinquency, and self-reported own delinquency (Schreck, Stewart, and Fisher 2006; Schreck, Wright, and Miller 2002).

Delinquent or risky lifestyles are, additionally, common correlates in research on school victimization (Campbell Augustine et al. 2002; George and Thomas 2000; Wilcox et al. 2006). The effect of a delinquent lifestyle, found in a great deal of research not specific to school-based incidents, is usually interpreted within an opportunity framework. Delinquency is presumed to generate opportunity for victimization in that it places individuals in peer groups with other offenders (because of group delinquency patterns), thus generating an exposed, vulnerable, and unguarded lifestyle (e.g., Jensen and Brownfield 1986; Lauritsen et al. 1992; Lauritsen, Sampson, and Laub 1991; Sampson and Lauritsen 1990; Schreck 1999; Schreck and Fisher 2004; Schreck et al. 2002, 2006; Stewart, Elifson, and Sterk 2004). In a similar fashion, studies have shown delinquent peer associations to be significantly positively related to student victimization (Schreck et al. 2003), as well as adolescent victimization more broadly (see, e.g., Schreck et al. 2006).

In sum, there is growing evidence that conventional attachments and commitments might serve to protect students from victimization, whereas involvement in school, impulsivity, involvement in delinquency, and association with delinquent peers can put students at risk for victimization. These effects have been interpreted within an opportunity framework suggesting that such factors indicate the extent to which offenders and victims or targets come into contact with each other in the absence of capable guardianship. However, is this supposed opportunity structure perhaps situational, varying depending on the victim's gender? We now turn to a discussion of the extent to which gender might serve to contextualize opportunity in middle and high schools.

Student Victimization: Gendered Opportunities?

Early work on the relationship between opportunity and adult victimization suggested that sociodemographic variables—including age, gender, marital status, and the like—could serve as proxies for "victimogenic" routine activities and lifestyles (Cohen, Kluegel, and Land 1981; Hindelang, Gottfredson, and Garofalo 1978). This work relied on the "principle of homogamy" to understand demographic correlates of victimization. The premise was that individual lifestyles and activities were likely to center on others with similar demographic characteristics, and victimization risk would be highest, therefore, among individuals within high-offending demographic groups (Cohen et al. 1981; Hindelang et al. 1978; Lauritsen et al. 1991). Given sex-segregated, male-dominated offending networks (Maher 1997; Steffensmeier 1983), greater rates of victimization among men is understandable.

Results from adolescent victimization research have similarly suggested that victimogenic and criminogenic behaviors might substantially overlap, accounting for victimization differences across social groups, including gender groups. The causal mechanism implied is one in which gender affects risky lifestyle and delinquency, which in turn affects adolescent victimization. Several studies provide evidence that the effect of gender on adolescent victimization is greatly attenuated once lifestyle, especially delinquent lifestyle, is controlled (Jensen and Brownfield 1986; Lauritsen et al. 1991). That being said, victimization differences still persist after controlling for delinquent lifestyle, especially in models estimating weapon-related personal victimization and various types of property victimization (Jensen and Brownfield 1986; Lauritsen et al. 1991; see also Lauritsen et al. 1992). Thus, gender often has effects on victimization risk net of criminogenic activities and lifestyle, but little attention has been paid to explaining this "residual" effect.

The role of gender in understanding opportunity for school-based victimization is even more obscure, as studies reveal mixed findings as to gender differences in school victimization. Male students experience greater victimization risk according to some research (e.g., Schreck et al. 2003), but other studies have shown few differences in risk across gender (Bastian and Taylor 1991; Campbell Augustine et al. 2002). Still others provide evidence of crime-specific gender differences regarding school-based victimization, with theft, for instance, being a crime that girls experience at rates equal to or even in excess of the rates experienced by boys (DeVoe et al. 2005; Wilcox et al. 2005). As such, gender does not seem to drive lifestyle- and activity-related opportunity structures for all types of school-based victimization in

the way that traditional applications of the principle of homogamy would predict. For some types of school-based victimizations, there may be no overwhelming gender difference to explain away with measures of exposure to high-offending groups.

The potentially unique nature of the relationship between gender and school victimization is not surprising, because it is conceivable that daily activities and "lifestyles" at school are structured more by the school organization than by gender (at least relative to activities outside of school). That is not to say that gender is irrelevant in an opportunity-based approach to school victimization. Gender may not predict routines presumed to be "opportunistic" for some school-based offenses, but it might, in fact, help define situational school-based criminal opportunity. Indicators traditionally treated as universal "risk" and "protective" factors regarding school-based victimization might suggest opportunity differently for male compared with female students. Social attachments and commitments, participation in school activities, self-control, association with delinquent peers, and involvement in delinquency might have different implications for criminal opportunity across male and female students. Gender may interact with these measures to create a situation in which more exposed or less guarded girls or their property are perceived as more suitable to offenders than more exposed or less guarded boys and their property.

Although the possible gender-conditioned effects of opportunity-related risk and protective factors regarding school victimization have not been examined explicitly before, they are implicitly supported by work aimed at integrating feminist and opportunity frameworks on female sexual assault victimization and women's street offending. Research suggests, for instance, that college women's risk for sexual victimization varies in part as a function of their participation in activities that put them into contact with groups of men socialized to view women as vulnerable, gratifiable targets (Mustaine and Tewksbury 2002; Schwartz and Pitts 1995). It is therefore the activities in combination with gender definitions that inform the risk for sexual victimization, according to this research. In short, the association of "risk" with routine activities is heavily gendered.

Previous ethnographic work on female offenders has also highlighted how gender helps define criminal opportunity. Miller's (1998) analysis of interviews with active inner-city St. Louis offenders revealed that the defining of opportunities regarding the enactment of robbery was heavily gendered. For instance, in contrast to the typical male robbery of another man through the use of physical force, Miller's female robbers often offended against other women, who were perceived as weaker, easier targets than men. When

female offenders did rob men, it was done while in the process of appearing sexually vulnerable or while robbing with male accomplices. Miller suggested that the accomplishment of robbery for women, therefore, was consistent with a "gender-stratified environment—one in which, on the whole, men are perceived as strong and women are perceived as weak" (p. 61).

Similarly, Mullins and Wright's (2003) analysis of inner-city St. Louis burglars showed that gender helped define situational opportunity for women to become initiated into burglary as well as to desist from burglary. For instance, Mullins and Wright reported that women were much more vulnerable to the deterrent and handling effects of social ties: These networks served to affect desistance for female burglars more so than male burglars. The research of Miller (1998) and Mullins and Wright is consistent with other work highlighting the idea that crime decisions can often be understood as situational "gender accomplishment" (e.g., Laidler and Hunt 2001; Maher 1997; Messerschmidt 1993).

Thus, previous work suggests that criminal decision making—in terms of initiation, selecting targets, and desistance—can be contextualized by gender. This work provides evidence that gender shapes offender choices on how to get involved, how to offend, whom to victimize, and how to get out. We believe that these "gendered opportunity" lines of inquiry can be extended and can be useful in understanding how activities that expose middle and high school students to peer groups in unguarded situations may create more risk for victimization for girls compared with boys.

The Present Study

Although the previously reviewed research has shown support for a perspective on school-based victimization that emphasizes opportunity-based risk factors at both individual and school levels, we believe that this line of inquiry can be refined further by examination of cross-gender differences in factors heretofore presumed to represent opportunity equally for all. More specifically, we question the assumption of the generalizability of individual opportunity-related risk and protective factors across gender through an exploratory gender-specific analysis of school-based victimization.

Data

The data for our exploration of possible gender differences in opportunity-related correlates of school victimization come from the Rural Substance

abuse and Violence Project (RSVP), a prospective longitudinal study conducted between spring 2001 and spring 2004 throughout Kentucky. We used all four waves of the student component of RSVP, collected through annual self-report surveys of a panel of students who were enrolled in seventh grade during the 2000-2001 academic year. Participants were selected through a multistage procedure involving, first, a stratified sampling of 30 of Kentucky's 120 counties.[2] Within the 30 selected counties, the principals of all public schools containing seventh graders were asked to participate, with 65 of the 74 principals agreeing. Finally, all seventh graders within the 65 participating schools, a total of 9,488 students, were targeted for inclusion in the sample. A parental consent procedure was used, and active consent was granted by the parents of 43 percent of the targeted population, leaving 4,102 sample participants.[3] Of those participants, we received completed surveys from 3,692 students in wave 1, 3,638 students in wave 2, 3,050 students in wave 3, and 3,040 students in wave 4.[4]

The response rate was generally consistent with other studies of students that used active parental consent, yielding rates ranging from 35 percent to 60 percent (Esbensen et al. 1996). Comparing demographic characteristics from our sample with Kentucky Department of Education (KDE) enrollment data for the 65 original schools in our sample, we found that the racial composition of our sample was fairly close to the KDE population data. Specifically, in wave 1, our sample percentage non-White was 9.55 percent, while the corresponding figure from the KDE data (which includes all students in the selected schools, not just seventh graders) was 10.18 percent. In contrast, our sample did appear to underrepresent boys, with about 45.5 percent of the wave 1 respondents being male compared with 51.9 percent for the KDE data.

Finally, sample attrition that occurred across waves did not appear to be systematically related to race or gender. The sample was 90.5 percent White and 45.4 percent male at wave 1, and it was 90.9 percent White and 45.9 percent male at wave 4. Considering race and gender combined, the sample at wave 1 was as follows: 4.8 percent non-White male, 5.0 percent non-White female, 42.7 percent White male, and 47.5 percent White female. By wave 4, the race and gender composition of the sample was 4.3 percent non-White male, 4.3 percent non-White female, 42.2 percent White male, and 49.2 percent White female. Despite little evidence of race and gender patterns in attrition, previous victims were slightly more likely to drop out of the sample. At each wave, the mean rate of victimization was lower among the participants who remained in the sample compared with those who had dropped out by wave 4. For instance, the mean rate of victimization was 1.0

among wave 1 participants who remained in the sample by wave 4, while the mean rate of victimization was 1.4 among wave 1 participants who had dropped out by wave 4. The wave 2 mean rate of victimization was 1.06 for those remaining in the sample throughout the study period; this wave 2 victimization rate was 1.5 for those who had dropped out by wave 4. Finally, wave 3 victimization was also lower among those staying in the sample compared with those dropping out by wave 4 (.95 vs. 1.3).[5]

Across all four waves, one or more observations were recorded from 3,977 of the 4,102 respondents whose parents granted consent. To examine the effects of interest across as many school- and grade-level contexts as possible, we pooled the individual data across years, leaving a sample of 13,420 data points (person-years) within 111 school contexts. Listwise deletion of cases with missing data on variables within the sample left 10,522 data points nested within 111 schools for analysis.[6]

Measures of Variables

Theft and assault victimization during the current school year were the dependent variables. Theft victimization was a dichotomous variable that measures whether students had money or property stolen (without force) on school grounds or at school-related activities. Assault victimization was a dichotomous variable measuring whether students were physically attacked on school grounds or at school-related activities. Although opportunity structures are often crime specific, findings from previous studies (reviewed above) suggested that the opportunity-related variables used in this study would correlate similarly with both types of victimization.

Guided by the previously reviewed criminal opportunity theory and school-based victimization findings, nine theoretical variables of interest were operationalized to measure an individual's opportunity structure for victimization. Attachment to parents was a multiple-item index measuring the frequency of interaction with parents and the nature of these relationships. Its 24 five-point items, which asked about specific aspects of respondents' relationships with both their mothers and fathers, were averaged (Cronbach's $\alpha = .93$ for boys, Cronbach's $\alpha = .93$ for girls). Attachment to school was a multiple-item index of the average across six items asking respondents on a four-point, Likert-type scale how strongly they agreed or disagreed with statements about their relationships with their teachers, the importance of education, and their attitudes toward school (Cronbach's $\alpha = .69$ for boys, Cronbach's $\alpha = .68$ for girls). An additional measure of attachment

or commitment to school was student grade point average (GPA), measured with an ordinal scale ranging from 1 (mostly F's) to 5 (mostly A's). Attachment to peers was a multiple-item index that measured the nature of respondents' relationships with their closest friends. Its 6 items, which asked respondents to select on a four-point, Likert-type scale how strongly they agreed or disagreed with statements regarding their attitudes toward and expectations of their closest friends, were averaged (Cronbach's α = .92 for boys, Cronbach's α = .90 for girls). Involvement in school sports was a single-item variable that measured the frequency with which respondents took part in school sports. Involvement in school activities was a single-item variable that measured the frequency with which respondents took part in other school activities.

Previous studies have reported that impulsivity, delinquent peer association, and self-reported delinquency are predictive of adolescent and/or school-based victimization. We incorporated these measures into our analyses. Impulsive personality was an index representing the average score across 11 survey items, each measured with a four-point, Likert-type scale, that accessed the multiple dimensions of this construct, including frustration, temper control, attention span, and restlessness (Cronbach's α = .91 for boys, Cronbach's α = .91 for girls). Respondents' exposure to delinquent peers was a multiple-item measure of whether their closest friends participated in a range of delinquent behavior during the present school year (1 = yes, 0 = no), including drug and alcohol use, truancy, drunk driving, school suspension, carrying a weapon to school, being arrested, drug dealing, theft, assault, and vandalism. Affirmative responses to the 17 dichotomous items were averaged to calculate a measure of exposure to delinquent peers (Cronbach's α = .92 for boys, Cronbach's α = .91 for girls). Respondents' self-reported criminal behavior was a 14-item scale measuring how often during the present school year respondents committed acts such as robbery, theft, assault, carrying weapons to school, using weapons in fights, and vandalism (Cronbach's α = .91 for boys, Cronbach's α = .84 for girls).

Several other individual-level constructs were included as control variables. Respondent's race was measured as non-White or White. Socioeconomic status was measured by computing the average of the responses to two seven-point scale items asking about the educational attainment of the respondent's father and mother. Finally, we controlled for the wave in which students participated by creating three dummy variables, with wave 1 as the referent. Descriptive statistics for all study variables described above are listed in Table 1.[7]

Table 1
Summary Statistics for Study Variables

Variable	Minimum	Maximum	Boys (n = 4,840) M (SD)	Girls (n = 5,682) M (SD)
Dependent variables				
Theft victimization	0	1	.46 (.50)	.50 (.50)
Assault victimization	0	1	.48 (.50)	.28 (.45)
Independent variables				
Attachment to parents	1	5	3.76 (.74)	3.73 (.78)
Attachment to school	1	4	3.08 (.57)	3.28 (.50)
Student grade point average	1	5	3.90 (.94)	4.16 (.83)
Attachment to peers	1	4	3.41 (.66)	3.73 (.46)
Involvement in school sports	1	5	2.76 (1.62)	2.63 (1.55)
Involvement in school activities	1	5	2.11 (1.47)	2.55 (1.55)
Impulsive personality	1	4	1.83 (.69)	1.77 (.64)
Delinquent peers	0	1	.27 (.27)	.25 (.26)
Self-reported criminal behavior	1	5	1.18 (.44)	1.07 (.21)
Race (White)	0	1	.91 (.29)	.91 (.28)
Socioeconomic status	1	7	4.37 (1.51)	4.26 (1.55)
Wave 2	0	1	.27 (.44)	.27 (.44)
Wave 3	0	1	.24 (.43)	.24 (.42)
Wave 4	0	1	.23 (.42)	.23 (.42)

Data Analysis

To address correlated errors resulting from students' being nested nonrandomly within schools, and to account for the dichotomous outcomes, we estimated hierarchical logistic regression models. Each model was estimated using HLM-6, allowing for appropriate specification of the two-level error structure (Raudenbush, Bryk, and Congdon 2000). Only individual-level variables were included as predictors in the victimization models. For each of the models discussed, all independent variables were grand mean centered, and robust standard errors were estimated.

We explored possible gender differences in correlates of victimization by estimating separate models for male and female students. To determine the structure of the final hierarchical logistic model for each type of victimization, a series of gender-specific models were estimated. First, unconditional (intercept-only) models were estimated to determine if significant variation existed in the victimization measures across schools. Next, models

that incorporated individual-level predictors and in which the intercept was specified as random were estimated to determine if there was variation in the type of victimization across schools not accounted for by compositional effects. Third, additional models were estimated in which the slope of each independent variable was allowed to vary randomly across schools. Slopes that did not vary significantly across schools were then fixed in the final hierarchical logistic model. Although we specified as random any slopes with significant cross-school variation, we did not incorporate cross-level interaction effects aimed at explaining such variation, because school-level conditioning effects were not the focus of this study.[8] Rather, we focused on the potential conditional impact of gender alone. Coefficients from the estimated victimization models for male and female students were tested for equality (Paternoster et al. 1998).

Results

Theft Victimization

The variance component for the unconditional model for boys was significant ($u_{0j} = .10$, $SD = .32$, $\chi^2 = 226.01$, $p < .01$), indicating cross-school variation in the mean theft victimization risk (β_{0j}) for boys. The variance component remained significant once individual-level independent variables were included ($u_{0j} = .11$, $SD = .33$, $\chi^2 = 226.04$, $p < .01$), indicating that there was variation in theft victimization risk for boys across schools not accounted for by the composition of the measured individual-level variables. Finally, several individual-level slopes were allowed to vary in the final model, including attachment to school, student GPA, involvement in school sports, self-reported criminal behavior, and race. The results of the final hierarchical logistic model of theft victimization for boys are presented in Table 2. Consistent with theory and previous victimization research, involvement in school sports, impulsive personality, self-reported criminal behavior, and delinquent peers significantly increased the likelihood of school-based theft victimization for boys. Examination of odds ratios for those effects indicated that a one-unit increase in each of these variables was associated with an increase in the odds of theft victimization of 8 percent, 34 percent, 80 percent, and 177 percent, respectively. Socioeconomic status was also significantly related to male theft victimization.

When analyzing theft victimization among girls, the unconditional model showed significant cross-school variation in the mean theft victimization risk (β_{0j}), as indicated by a significant variance component ($u_{0j} = .11$,

Table 2
Hierarchical Logistic Models of School-Based Theft Victimization Risk by Gender

	Model A: Boys			Model B: Girls			Test of Equality of Regression Coefficients
Variable	Coefficient	*SE*	Odds Ratio	Coefficient	*SE*	Odds Ratio	*z* Score
Individual (level 1) fixed effects							
Attachment to parents	.02	.05	1.02	–.22*	.04	.81	3.75*
Attachment to school	.02	.07	1.02	–.09	.07	.92	1.11
Student grade point average	–.03	.04	.97	.12*	.04	1.12	–2.65*
Attachment to peers	–.04	.05	.96	–.20*	.06	.82	2.05*
Involvement in school sports	.08*	.02	1.08	.09*	.02	1.10	–.35
Involvement in school activities	.04	.02	1.04	.05*	.02	1.05	–.35
Impulsive personality	.29*	.05	1.34	.37*	.06	1.44	–1.02
Delinquent peers	1.02*	.15	2.77	1.02*	.15	2.78	.00
Self-reported criminal behavior	.59*	.13	1.80	1.13*	.22	3.09	–2.11*
Race	.13	.13	1.14	–.12	.11	.89	1.47
Socioeconomic status	.05*	.02	1.06	.05*	.02	1.05	.00
Wave 2	–.07	.09	.93	–.13	.07	.88	.53
Wave 3	–.21*	.10	.81	–.27*	.10	.76	.42
Wave 4	–.41*	.11	.66	–.54*	.11	.58	.84
School (level 2) fixed effects							
Intercept	–.19*	.05	.82	.00	.04	.99	

(continued)

Table 2 (continued)

Random effects	Model A: Boys		Model B: Girls	
	SD	Variance Component	*SD*	Variance Component
Mean victimization risk	.35	.13*	.32	.10*
Attachment to parents slope			.18	.03*
Attachment to school slope	.33	.11*	.31	.09*
Student grade point average slope	.19	.04*		
Involvement in school sports slope	.11	.01*		
Self-reported criminal behavior slope	.59	.35*	.69	.47*
Race slope	.52	.27*		
Level 1 extra binomial error	.98	.96	.99	.98

Note: Level 1: $n = 4{,}840$ boys, $n = 5{,}682$ girls; level 2: $n = 111$ schools.
*$\alpha < .05$.

SD = .33, χ^2 = 261.14, $p < .01$). When the fixed effects of the individual-level variables were estimated in a random-intercept theft model for female students, the variance component was reduced but remained significant (u_{0j} = .09, *SD* = .30, χ^2 = 242.86, $p < .01$). Additional models revealed that the slopes for attachment to parents, attachment to school, and self-reported criminal behavior varied significantly across schools; therefore, they were specified as random in the final model. The results of our final hierarchical logistic model of theft victimization risk at school for girls (Table 2) indicated that higher student GPA, involvement in school sports, involvement in school activities, impulsive personality, delinquent peers, and self-reported criminal behavior were associated with increased risk for female theft victimization. Of particular note, the odds ratios for delinquent peers and self-reported criminal behavior were quite large, suggesting that the odds of female theft victimization increased 2.78 and 3.09 times, respectively, with each one-unit increase in delinquent associations and own delinquency. Conversely, attachment to parents and attachment to peers significantly reduced the risk for theft victimization at school for female students. In terms of control variables, higher levels of socioeconomic status increased the likelihood of theft victimization at school for girls, as was the case for boys.

To more fully explore the possible gendered effects of situational opportunity on theft victimization risk at school, the last column in Table 2 provides the *z* scores from the test for the equality of regression coefficients ($\alpha < .05$). The results show that the regression coefficients for attachment to parents, student GPA, attachment to peers, and self-reported criminal behavior were significantly different for boys and girls.

Assault Victimization

As with the models of theft victimization, we produced gender-specific unconditional (intercept-only) models of assault victimization risk to determine if significant variation existed across schools. The variance component for the boys-only model was significant (u_{0j} = .23, *SD* = .48, χ^2 = 365.07, $p < .01$), indicating cross-school variation in the mean assault victimization risk (β_{0j}) for boys. Once individual-level independent variables were added to the model, the variance component for mean male assault victimization remained significant (u_{0j} = .10, *SD* = .32, χ^2 = 205.51, $p < .01$), indicating variation in assault victimization risk for boys across schools not accounted for by the composition of the measured individual-level

variables. Preliminary models also indicated that the slopes for attachment to parents, involvement in school sports, and self-reported criminal behavior were significantly variable across schools. As such, they were specified as random in the final model of male assault victimization presented in Table 3.

The findings reported in Table 3 indicate that involvement in school activities, impulsive personality, delinquent peers, and self-reported criminal behavior increased the risk for assault victimization at school for boys. In addition, assault risk was higher for White male students and those boys reporting higher levels of socioeconomic status. Conversely, student GPA, attachment to peers, and involvement in school sports significantly reduced the likelihood of assault victimization at school for boys.

The above procedure was repeated to estimate the assault victimization risk at school for girls. The unconditional model indicated significant variation in the mean assault victimization risk (β_{0j}) for girls across schools (u_{0j} = .21, *SD* = .46, χ^2 = 340.32, $p < .01$). When the fixed effects of the individual-level variables were estimated in a random-intercept assault model for female students, the variance component was reduced to nonsignificance (u_{0j} = .00, *SD* = .01, χ^2 = 18.35, $p > .05$). Preliminary models also revealed significant cross-school variation in the effect of self-reported criminal behavior. Thus, that slope reported in Table 3 was specified as random in the final model for female assault victimization. The results presented in Table 3 indicate that involvement in school sports, involvement in school activities, impulsive personality, delinquent peers, and self-reported criminal behavior increased the risk for assault victimization at school for girls. The effect of self-reported criminal behavior is particularly noteworthy, with the odds of assault victimization increasing some 25 times per unit increase in delinquency. In addition, assault risk was significantly higher for White female students. In contrast, attachment to parents and attachment to peers significantly reduced the risk for assault victimization at school for female students.

Table 3 also provides the *z* scores from the test of differences in coefficients across male and female assault victimization models. As Table 3 indicates, regression coefficients for involvement in school sports and self-reported criminal behavior were significantly different across male and female students in estimating assault victimization. Both of these variables enhanced the likelihood of assault victimization for girls much more so than boys. In contrast, reporting assault victimization during wave 2 and wave 3 (in comparison with wave 1) was reduced significantly more so for boys as opposed to girls.

Table 3
Hierarchical Logistic Models of School-Based Assault Victimization Risk by Gender

	Model A: Boys			Model B: Girls			Test of Equality of Regression Coefficients
Variable	Coefficient	*SE*	Odds Ratio	Coefficient	*SE*	Odds Ratio	*z* Score
Individual (level 1) fixed effects							
Attachment to parents	–.11	.06	.90	–.17*	.05	.84	.77
Attachment to school	–.04	.08	.96	.06	.09	1.06	–.83
Student grade point average	–.11*	.04	.90	–.05	.05	.95	–.94
Attachment to peers	–.22*	.05	.80	–.36*	.07	.70	1.63
Involvement in school sports	–.06*	.02	.94	.08*	.02	1.08	–4.95*
Involvement in school activities	.11*	.02	1.11	.09*	.03	1.10	.55
Impulsive personality	.39*	.06	1.48	.54*	.05	1.72	–1.92
Delinquent peers	.77*	.13	2.17	.80*	.18	2.22	–.14
Self-reported criminal behavior	.89*	.17	2.44	3.23*	.38	25.39	–5.62*
Race	.28*	.13	1.33	.28*	.13	1.32	.00
Socioeconomic status	.08*	.02	1.08	.01	.03	1.01	1.94
Wave 2	–.40*	.08	.67	–.17*	.06	.84	–2.30*
Wave 3	–.96*	.10	.38	–.66*	.09	.52	–2.23*
Wave 4	–1.25*	.10	.29	–1.16*	.11	.31	–.61
School (level 2) fixed effects							
Intercept	–.05	.05	.95	–1.04*	.04	.35	
Random effects	*SD*	Variance Component		*SD*	Variance Component		
Mean victimization risk	.35	.12*		.24	.06*		
Attachment to parents slope	.31	.09*					
Involvement in school sports slope	.12	.02*					
Self-reported criminal behavior slope	.88	.78*		2.27	5.18*		
Level 1 extra binomial error	.98	.96		.99	.97		

Note: Level 1: $\nu = 4{,}840$ boys, $n = 5{,}682$ girls; level 2: $n = 111$ schools.
*$\alpha < .05$.

Discussion

Recently, studies on school victimization have begun to move from descriptive to causal, with theory and empirical research implicating criminal opportunity as a key component to understanding school victimization. In the present study, we sought to examine an implicit assumption within this area of research, that is, that presumed indicators of opportunity for school victimization operate similarly across student subpopulations, namely, girls and boys. Although we had no ability to test actual perceptions of offenders in this study, we grounded our exploratory examination of the conditional role of gender in previous work suggesting that gender may be used by offenders to assess target vulnerability and gratifiability. As such, we wondered whether risk and protective factors would exhibit stronger effects for girls as opposed to boys. Several statistically significant differences in effects were found, providing modest support for the idea that gender helps shape perceived opportunity.

This possible interpretation for gender-specific effects is consistent with previous work pointing to the perceived vulnerability of female targets on the part of offenders (Finkelhor and Asdigian 1996; Miller 1998; Mustaine and Tewksbury 2002; Schwartz and Pitts 1995), but it nonetheless remains speculative. There are undoubtedly other possible reasons why gender differences in indicators of opportunity emerge, but we are unaware of strong theory or prior research that would elucidate such possibilities. As such, we provide one possible theoretical interpretation of such differences: that gender exacerbates indicators of opportunity because it also provides cues (perhaps misguided) to offenders about opportunity.

The specific ways in which gender-conditioned opportunity indicators varied across type of victimization remain in question. On one hand, this is not altogether surprising, given that opportunity structures that facilitate one type of victimization are not necessarily conducive to all types of victimization. Nonetheless, the measures of opportunity-related risk and protective factors were not obviously crime specific, and as such, we expected them to exhibit similar main effects and conditional effects (conditional on gender) across theft and assault models.

The one risk factor that was moderated by gender regardless of crime type was self-reported criminal involvement. It was the strongest predictor of both theft and violent victimization for female students, and its effect was much larger than for male students. Although previous research has addressed the intertwined nature of offending and victimization (Lauritsen et al. 1991, 1992; Sampson and Lauritsen 1990), our findings suggest that

this close coupling is especially discernable for female adolescents. Jensen and Brownfield (1986) originally suggested that the effects of gender on victimization might be mediated by exposure in the form of delinquent involvement. Our study reframes this debate as one of moderation rather than mediation. Future work should aim to understand more fully the dynamics behind this robust conditional effect, but preliminary interpretation is that female delinquents represent particularly opportunistic targets of victimization from an offender vantage point.

Although interesting gender-specific findings did emerge from this exploration, we should not lose sight of the fact that many predictors were consistent, regardless of gender. For instance, theft victimization was similarly positively related to involvement in sports, impulsivity, and delinquent peers for both male and female students. Theft victimization was equally negatively related to grade level (as measured by the wave variable) for both male and female students. Assault victimization was equally negatively related to attachment to peers and grade level for both genders, and it was positively related to involvement in nonsports activities, impulsive personality, and delinquent peers similarly across male and female models. Overall, the fact that more of the individual-level effects examined here were similar as opposed to different across gender suggests that general opportunity reduction strategies in school should, in many instances, yield similar benefits to both male and female students. Despite that general tendency, those interested in school crime prevention should also be attuned to the possibility that gender may, in some situations, help define opportunity.

In conclusion, our study is important in its delineation of both gender specific and gender-neutral opportunity-related risk factors regarding school victimization. However, it is limited in several important ways, necessarily qualifying our findings. For instance, the Kentucky-based sample, combined with a limited response rate, raises suspicion about the generalizability of our findings to middle and high school students across the United States. Furthermore, as noted in the description of the sample above, attrition occurred across the four waves of data collection, with patterns of attrition at least loosely related to victimization. Given such limitations, although we think that our findings provide a new direction for better understanding of school-based victimization, replication with other samples is clearly needed. Nonetheless, it is noteworthy that the RSVP longitudinal sample has produced findings consistent with long-standing criminological theory and other data sources, so we have no reason to believe that it is unusual (see, e.g., Ousey and Wilcox 2007; Wilcox et al. 2006).

Another possible limitation of our study relates to temporal order. To use students from as many school contexts and grade levels as possible, we treated each student-year within the panel as a unique case. Hence, we were not able to carefully control the temporal ordering of independent and dependent variables. Although this is considered a limitation by many, we justify our decision with our belief that victimization opportunity is highly situational, with *situational* referring to the immediate context at hand. Therefore, the idea that one-year lagged independent variables predict current-year victimization seems somewhat far fetched; instead, we simply assume the effects to be contemporaneous. However, modeling contemporaneous rather than lagged effects opens the possibility that our specification of causal order between opportunity-related risk factors and student victimization is incorrect. This approach, furthermore, does make it difficult to discern whether opportunity contexts are at least partially developmentally defined, an idea hinted at by the significant effects of several of the wave dummy variables for assault victimization. In particular, risk for assault declined over the waves of the study more so for boys as opposed to girls. Although not the focus of this study, the potentially dynamic nature of gendered opportunity structures is clearly an issue deserving attention in future research.[9]

Finally, our analysis did not allow us to fully unpack the reasoning behind the gendered effects we found. We interpreted these conditional effects using offender decision-making and opportunity frameworks, but that interpretation is admittedly speculative. Future work is suggested for gaining clarity regarding the ways in which gender transforms risk and protective factors for adolescents while at school. This work could perhaps incorporate information from offenders about how gender affects perceived target suitability or tap, from victim surveys, more explicit measures of the dimensions of opportunity highlighted here as possibly key in understanding gender-specific effects. Thus, despite its limitations, our study provides an agenda for continued exploration of the notion of gendered opportunity.

Notes

1. Campbell Augustine et al. analyzed data from the Kentucky Youth Survey, which served as a pilot project for the Rural Substance Abuse and Violence Project (RSVP). Their data were not the same as those analyzed in the current study.

2. Kentucky's 120 counties were grouped into four strata on the basis of population size. Counties were selected with probability proportional to size of stratum for three of the four strata. One stratum, containing counties with 250,000 or more persons, contained only two counties; both counties in this stratum were included in the sample.

3. Following Dillman's (1978) recommended methods for mail surveys, consent letters were mailed to all parents of the 9,488 seventh grade students. A reminder postcard was sent two to three weeks later, a new cover letter and response form were mailed after four to five weeks, and a final cover letter and response form were mailed after eight weeks.

4. Once parental consent was obtained, missing data were due largely to (1) student transfer between the time of parental consent and survey administration and (2) student absenteeism on the day of survey administration. We attempted to obtain both types of missing data through tracking and follow-up procedures, with such procedures allowing us to obtain what would otherwise be missing data from approximately half of those missing after the first day of survey administration. Very little of the missing data came from student refusals, with fewer than 1 percent of sampled students explicitly choosing to not participate.

5. Despite the relationship between victimization and attrition, we obtained similar results when estimating our models on single early waves of data (e.g., wave 1 or wave 2) compared with estimating our models on the pooled sample, whose estimates may have been biased because of sample attrition. Thus, although victims may have been more likely to drop out of the sample, this pattern of attrition did not appear to alter the relationships examined in this study.

6. Missing data were confined largely to two variables: student socioeconomic status and peer delinquency at wave 1. During the first wave, students were asked (in an open-ended fashion) to indicate "how many" friends had engaged in various delinquent activities. Many students simply put checkmarks next to items rather than actual numbers, leaving many items blank. To retain the checkmarks as valid responses and use all four waves of data, we dichotomized each of the delinquent peer items. Although we presume that the peer delinquency items left blank in wave 1 were intended as "zeros" rather than missing cases, we conservatively treated them as missing in this analysis. Other analyses with these data have revealed few differences between treating these wave 1 cases in question as missing, treating them as zeros, or using full information maximum likelihood missing-data imputation (see, e.g., Ousey and Wilcox 2007; Wilcox et al. 2006).

7. A complete list of all survey items used to construct multiple-item indexes is available from the first author.

8. Despite school-level main and moderating effects being beyond the scope of this study, an anonymous reviewer pointed out that controlling for school-level differences might explain away gender differences we found in our models (i.e., different slopes across male and female models may have been due to different levels of school delinquency as opposed to gender). To discern the possible confounding effects of school context, we did estimate models in which we controlled for school-level socioeconomic status (percentage of students receiving free or reduced-price lunch), school-level gender composition (percentage male), school-level racial composition (percentage non-White), and school delinquency rates (on the basis of aggregated teacher-based reports of student delinquency). Those models indicated no significant differences in the level 2 effects on victimization across male or female students. Most important, controlling for those school-level variables did not change any of our findings regarding the gender differences in the effects of individual-level opportunity-related predictor variables. These models incorporating school-level effects are available from the first author on request.

9. Treating each person-year as a unique case might also introduce serial autocorrelation, though conventional wisdom suggests that with such a short time series (four years) and large sample, this problem should be minimal (Stimson 1985).

References

Anderman, Eric A. and David M. S. Kimweli. 1997. "Victimization and Safety in Schools Serving Adolescents." *Journal of Early Adolescence* 17:408-38.

Astor, Ron Avi, Heather Ann Meyer, and William J. Behre. 1999. "Unowned Places and Times: Maps and Interviews about Violence in High Schools." *American Educational Research Journal* 36:3-42.

Bastian, Lisa D. and Bruce M. Taylor. 1991. *School Crime: A National Crime Victimization Survey Report*. Washington, DC: U.S. Government Printing Office.

Blackwell, Brenda Sims, Christine S. Sellers, and Sheila M. Schlaupitz. 2002. "A Power-Control Theory of Vulnerability to Crime and Adolescent Role Exits Revisited." *Canadian Review of Sociology and Anthropology* 39:199-218.

Campbell Augustine, Michelle, Pamela Wilcox, Graham C. Ousey, and Richard R. Clayton. 2002. "Opportunity Theory and Adolescent School-Based Victimization." *Violence and Victims* 17:233-53.

Cohen, Lawrence E., James R. Kluegel, and Kenneth C. Land. 1981. "Social Inequality and Predatory Criminal Victimization: An Exposition and Test of a Formal Theory." *American Sociological Review* 46:505-24.

Crowe, Timothy D. 1990. "Designing Safer Schools." *School Safety* Fall:9-13.

DeVoe, Jill F., Katherin Peter, Margaret Noonan, Thomas D. Snyder, and Katrina Baum. 2005. *Indicators of School Crime and Safety: 2005*. NCES 2006-001/NCJ 210697. Washington, DC: U.S. Government Printing Office.

Dillman, Don A. 1978. *Mail and Telephone Surveys: The Total Design Method*. New York: John Wiley.

Esbensen, Finn-Aage, Elizabeth Piper Deschenes, Ronald E. Vogel, Jennifer West, Karen Arboit, and Lesley Harris. 1996. "Active Parental Consent in School-Based Research: An Examination of Ethical and Methodological Considerations." *Evaluation Review* 20:737-53.

Felson, Marcus. 1986. "Linking Criminal Choices, Routine Activities, Informal Control and Criminal Outcomes." Pp. 119-28 in *The Reasoning Criminal*, edited by Derek B. Cornish and Ronald V. Clarke. New York: Springer-Verlag.

Finkelhor, David and Nancy L. Asdigian. 1996. "Risk Factors for Youth Victimization: Beyond a Lifestyles Theoretical Approach." *Violence and Victims* 11:3-20.

Garofalo, James, Leslie Siegel, and John Laub. 1987. "School-Related Victimizations among Adolescents: An Analysis of National Crime Survey (NCS) Narratives." *Journal of Quantitative Criminology* 3:321-38.

George, Rani and George Thomas. 2000. "Victimization among Middle and High School Students: A Multilevel Analysis." *High School Journal* 84:48-57.

Hindelang, Michael J., Michael R. Gottfredson, and James Garofalo. 1978. *Victims of Personal Crime: An Empirical Foundation for a Theory of Personal Victimization*. Cambridge, MA: Ballinger.

Jensen, Gary F. and David Brownfield. 1986. "Gender, Lifestyles, and Victimization: Beyond Routine Activity." *Violence and Victims* 1:85-99.

Laidler, Karen Jo and Geoffrey Hunt. 2001. "Accomplishing Femininity among Girls in the Gang." *British Journal of Criminology* 41:656-78.

Lauritsen, Janet L., John H. Laub, and Robert J. Sampson. 1992. "Conventional and Delinquent Activities: Implications for the Prevention of Violent Victimization among Adolescents." *Violence & Victims* 7:91-108.

Lauritsen, Janet L., Robert J. Sampson, and John H. Laub. 1991. "The Link between Offending and Victimization among Adolescents." *Criminology* 29:265-92.

Maher, Lisa. 1997. *Sexed Work: Gender, Race and Resistance in a Brooklyn Drug Market*. Oxford, UK: Clarendon.

Messerschmidt, James W. 1993. *Masculinities and Crime*. Lanham, MD: Rowman & Littlefield.

Miller, Jody. 1998. "Up It Up: Gender and the Accomplishment of Street Robbery." *Criminology* 36:37-66.

Mullins, Christopher W. and Richard Wright. 2003. "Gender, Social Networks and Residential Burglary." *Criminology* 41:813-39.

Mustaine, Elizabeth Erhardt and Richard Tewksbury. 2002. "Sexual Assault of College Women: A Feminist Interpretation of a Routine Activities Analysis." *Criminal Justice Review* 27:89-123.

Osgood, D. Wayne, Amy L. Anderson, and Jennifer N. Shaffer. 2005. "Unstructured Leisure in the After-School Hours." Pp. 45-64 in *Organized Activities as Contexts of Development: Extracurricular Activities, After-School and Community Programs*, edited by Joseph L. Mahoney, Reed W. Larson, and Jacquelynne S. Eccles. Mahwah, NJ: Lawrence Erlbaum.

Ousey, Graham and Pamela Wilcox. 2007. "The Interaction of Antisocial Propensity and Life-Course Predictors of Delinquent Behavior: Differences by Method of Estimation and Implications for Theory." *Criminology* 45:401-41.

Paternoster, Raymond, Robert Brame, Paul Mazerolle, and Alex Piquero. 1998. "Using the Correct Statistical Test for the Equality of Regression Coefficients." *Criminology* 36:859-66.

Raudenbush, Stephen W., Anthony S. Bryk, and Richard T. Congdon. 2000. *HLM 6 Hierarchical Linear and Nonlinear Modeling*. Chicago: Scientific Software International.

Sampson, Robert J. and Janet L. Lauritsen. 1990. "Deviant Lifestyles, Proximity to Crime and the Offender-Victim Link in Personal Violence." *Journal of Research in Crime & Delinquency* 27:110-39.

Schreck, Christopher J. 1999. "Criminal Victimization and Low Self-Control: An Extension and Test of a General Theory of Crime." *Justice Quarterly* 16:633-54.

Schreck, Christopher J. and Bonnie S. Fisher. 2004. "Specifying the Influence of Family and Peers on Violent Victimization: Extending Routine Activities and Lifestyle Theories." *Journal of Interpersonal Violence* 19:1021-41.

Schreck, Christopher J., Bonnie S. Fisher, and J. Mitchell Miller. 2004. "The Social Context of Violent Victimization: A Study of the Delinquent Peer Effect." *Justice Quarterly* 21:23-47.

Schreck, Christopher J., J. Mitchell Miller, and Chris L. Gibson. 2003. "Trouble in the School Yard: A Study of the Risk Factors of Victimization at School." *Crime & Delinquency* 49:460-84.

Schreck, Christopher J., Eric A. Stewart, and Bonnie S. Fisher. 2006. "Self-Control, Victimization, and Their Influence on Risky Lifestyles: A Longitudinal Analysis Using Panel Data." *Journal of Quantitative Criminology* 22:319-40.

Schreck, Christopher, J. Richard A. Wright, and J. Mitchell Miller. 2002. "A Study of Individual and Situational Antecedents of Violent Victimization." *Justice Quarterly* 19:159-80.

Schwartz, Martin D. and Victoria L. Pitts. 1995. "Exploring a Feminist Routine Activities Approach to Explaining Sexual Assault." *Justice Quarterly* 12:9-31.

Steffensmeier, Darrel. 1983. "Organization Properties and Sex Segregation in the Underworld: Building a Sociological Theory of Sex Differences in Crime." *Social Forces* 61:1010-32.

Stewart, Eric A., Kirk W. Elifson, and Claire E. Sterk. 2004. "Integrating the General Theory of Crime into an Explanation of Violent Victimization among Female Offenders." *Justice Quarterly* 21:159-81.

Stimson, James A. 1985. "Regression in Space and Time: A Statistical Essay." *American Journal of Political Science* 29:914-47.

Wilcox, Pamela, Michelle Campbell Augustine, Jon Paul Bryan, and Staci D. Roberts. 2005. "The 'Reality' of Middle School Crime: Objective vs. Subjective Experiences among a Sample of Kentucky Youth." *Journal of School Violence* 4:3-28.

Wilcox, Pamela, Kenneth C. Land, and Scott A. Hunt. 2003. *Criminal Circumstance: A Dynamic, Multicontextual Criminal Opportunity Theory*. Hawthorne, NY: Aldine de Gruyter.

Wilcox, Pamela, David C. May, and Staci D. Roberts. 2006. "Student Weapon Possession and the 'Fear and Victimization Hypothesis': Unraveling the Temporal Order." *Justice Quarterly* 23:502-29.

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