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Culture as Values or Culture in Action? Street Codes and Student Violent Offending

Kristin Swartz,

University of Louisville, Louisville, KY, USA

Pamela Wilcox, and

University of Cincinnati, Cincinnati, OH, USA

Graham C. Ousey

College of William and Mary, Williamsburg, VA, USA

Abstract

This study draws upon two competing cultural perspectives—culture-as-values and culture-in-action—in order to examine the relationship between street codes and the propensity to violently victimize others. Specifically, it explores whether individual-level and school-level street codes, net of one another, are related to three types of violence: assault, robbery and sexual battery. In addition, it considers whether these effects vary according to three contextual characteristics: 1) the location of the offending—in-school versus out-of-school; 2) school-level economic disadvantage; and 3) school efficacy. Three-level ordinal logistic regression models are estimated using four waves of survey data from over 3,000 students nested within 103 schools. Results provide evidence that *individual-level* street codes are related to violent offending in a manner that is, largely speaking, not tied to context. However, there is some evidence that the effects of *school-level* street codes on offending differ between outside of school and in school settings and are conditioned by levels of school disadvantage and efficacy. Overall, some support is offered for both the culture-as-values and culture-in-action perspectives.

Keywords

culture; street codes; violence; schools

This study examines school-based victimization from the vantage point of student offending behavior. The most recent national school crime data from 2014 indicate that students between the ages of 12 and 18 experienced 486,400 violent victimizations at school—a figure that includes simple assault, aggravated assault, rape, sexual assault, and robbery (Zhang, Musu-Gillette, and Oudekerk, 2016). Such statistics indicate that crime occurring at school remains an important issue, with most student victimizations involving another student as the offender. In fact, among youth 12–18, the rate of non-fatal victimization at

Address correspondence to Kristin Swartz, Department of Criminal Justice, University of Louisville, 209 Brigman Hall, Louisville, KY 40292.

NOTES

school exceeds the rate of non-fatal victimization away from school—33 per 100,000 versus 24 per 100,000) (Zhang, Musu-Gillette, and Oudekerk, 2016, p. 24). Nonetheless, there is substantial variability across schools in the extent to which their respective students experience crime and victimization both within and outside the school. For example, in 2009–2010, 26% of schools reported zero violent incidents, whereas 19% of schools reported 20 or more serious and non-serious violent crimes (Robers, Kemp, Rathburn, & Morgan, 2014, p. 30). At the most extreme end of the spectrum, about 2% of schools reported more than 10 serious violent offenses¹ (Robers et al., 2014, p. 30).

Understanding why crime and victimization vary across school settings has become an important line of inquiry during the last several decades (e.g., Gottfredson, 1986, 2001) and researchers have produced several salient findings. For instance, violence is more likely to occur in public schools located in urban communities characterized by concentrated disadvantage and high crime rates (Gottfredson, 2001; Robers et al., 2014; Stewart, 2003; Welsh, Greene, & Jenkins, 1999). Additionally, offending and victimization in schools has been shown to be associated with school climate indicators such as the perceived fairness and clarity of school rules, perceptions of disorder, collective efficacy, and the extent of communal school organization (e.g., Burrow & Apel, 2008; Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Kirk, 2009; Payne, Gottfredson, & Gottfredson, 2003; Schreck, Miller, & Gibson, 2003; Welsh, 2001; Wilcox & Clayton, 2001). Finally, the role of culture—at the individual and school levels—has received some attention, but quantitative tests of its effects remain few in number and findings have been somewhat contradictory. While some studies have shown that school-level measures of culture affect offending, other studies suggest that school-level culture has little impact once individual-level cultural values are taken into account (cf. Brezina, Piquero, & Mazerolle, 2001; Felson, Liska, South, & McNulty, 1994; Ousey & Wilcox, 2005).

Given both the relative dearth and contradictory findings of extant research, it is clear that further inquiry regarding the respective effects of individual- and school-level cultural effects on student offending is needed. Toward that end, we draw from Anderson’s code of the street framework as well as recent discussions of the “culture-as-values” and “culture-in-action” perspectives (e.g., see Sampson and Bean, 2006) to examine whether and how culture affects the extent to which students’ engage in the violent victimization of others. More specifically, we use these cultural models to develop hypotheses about the expected effects of individual- and school-level measures of street codes on violent behavior, both in general and across contextual settings. These hypotheses are investigated with three-level ordinal logistic regression models of data from a panel of adolescents embedded sampled from middle- and high-schools in Kentucky. Before presenting the details of that analysis, we first discuss the theoretical perspectives and empirical research that serves to frame the current study.

¹Serious violent offenses include rape, sexual assault, robbery, and aggravated assault.

THEORETICAL BACKGROUND

In the past few decades, cultural explanations of crime have experienced a general resurgence. In part this has been due to the influence of Elijah Anderson's (1999) book *Code of the Street: Decency, Violence, and the Moral Life of the Inner-City*. In that seminal work, Anderson argues that crime—especially violence among young males—is heavily influenced by an emergent cultural code that encourages violence in certain situations, called the “code of the street.” Anderson (1999) proposes that street codes readily develop in structurally disadvantaged inner-city neighborhoods, in part because residents in such contexts have extreme difficulty achieving status, respect, and success through the same channels as those in more advantaged communities. In essence, the street code is a cultural adaptation to conditions of severe deprivation that redefines both standards for success and the means by which respect and status are obtained. Moreover, it dictates a set of rules that govern how individuals should interact with one another, especially in public settings. In particular, public displays of physical toughness are valued, and violent retaliation to insults and disrespect is expected. Therefore, neighborhoods characterized by this street code tend to experience higher rates of violence.

Anderson's discussion suggests that the influence of the street code occurs at multiple levels of analysis. On the one hand, it is seen as an emergent property of the neighborhood collective that may impinge on the behavior of all residents. Yet Anderson also points out that families and individuals are differentiated in the extent to which they internalize and adhere to the code. He refers to those who fully subscribe to the code as “street” and those who largely reject the code as “decent.” This distinction between “street” and “decent” families/individuals suggests that Anderson's conceptualization of street codes draws on elements from two ostensibly opposed cultural frameworks: the *culture-as-values* and *culture-in-action* perspectives (see Byrne & Stowell, 2007; Sampson & Bean, 2006; Swidler, 1986).

Culture as Values versus Culture in Action

The culture-as-values perspective has deep roots in criminology, evident in many classic “cultural deviance” theory frameworks. It conceptualizes culture as a set of values that are shared and widespread within particular places or social groups within society. These values are key content transmitted to individuals through the socialization process. In other words, the cultural values of the community or social group become internalized by individuals, who then act in accordance with them. This culture-as-values perspective essentially suggests that “group culture” becomes “individual culture.” Consequently, group-level culture affects individual behavior only indirectly, through its impact on the individual values that are determinative of behavior. As such, group culture becomes indistinguishable from the values internalized by individuals, *and variations in group-level values therefore have no independent impact on behavior once individual-level variations in internalized cultural values have been taken into account*. Some have described this cultural theory as presenting individuals as “cultural dopes” (Garfinkel, 1967; Swidler, 1986; Wrong, 1961), in that once socialized, individuals will mindlessly behave as their internalized cultural values dictate.

In contrast, the culture-in-action perspective asserts that “culture is not a unified system that pushes action in a consistent direction,” but is a toolkit or repertoire that individuals choose from in order to construct lines of action appropriate for their current context or social situation (Swidler 1986: 277; see also Berg & Stewart, 2013; Byrne & Stowell, 2007; Lamont & Small, 2008; Lee & Ousey, 2011; Kirk & Papachristos, 2015; Matsueda, 2015; Sampson & Bean, 2006). It assumes that groups and individuals maintain varied cultural skills, any of which may be activated in order for them “to do different kinds of things in different circumstances” (Swidler 1986, p. 276). Thus, even if individuals profess certain cultural “values,” their actions may not closely align with those values. This is because, beyond values, culture provides tools that enable individuals to actively construct lines of action that are situationally appropriate, rather than simply serving as a force that inexorably produces behavior reaffirming a particular value orientation.

As noted earlier, Anderson’s discussion of “street” and “decent” individuals and families exhibits elements of both of these perspectives. First, the distinction between “decent” and “street” suggests that individuals differ in the extent to which they internalize cultural values. Members of street families strongly embrace and internalize “street values” that emphasize the use of or threat of violence in response to transgressions or challenges, especially when against one’s reputation (Anderson, 1999; Jacobs, 2004). To simply walk away when disrespected, especially if slighted or challenged in public, would be seen as being weak—as being a “punk.” Thus, specific “street” values include: “retaliate with violence if violence is used against you;” “allowing someone to challenge you sends the message that you are weak;” and “sometimes you must use threats to be treated fairly” (Anderson, 1999; Stewart & Simons, 2010). Anderson’s work implies that “street” individuals have a high propensity for violence because they’ve internalized such values, defining aggression as the best response to various situations. Clearly, this aspect of Anderson’s work is most consistent with the argument made by the culture-as-values perspective.

In contrast, Anderson describes “decent” individuals in a way that is more consistent with the culture-in-action perspective. Decent individuals are those who have not internalized the oppositional cultural values of the street code. Nonetheless, they are aware of the “rules of the game” that the street code defines; and they know that they may sometimes need to invoke those cultural tools in order to effectively navigate through particular public situations. In other words, decent individuals will *sometimes* “perform” the street code even though their own internalized values essentially contradict it. This suggests that Anderson views decent individuals as active users of cultural tools that include, but are not limited to, their own internalized values. They employ action strategies consistent with their own conventional values in as many interactions as is possible, especially when they interact with representatives of mainstream institutions such as teachers or church leaders. On the other hand, they know that sometimes it is necessary to perform behaviors consistent with the street code, such as when they encounter “street” individuals while negotiating public settings. Thus, Anderson’s work suggests that decent individuals actively engage in a kind of “code switching” that is a prominent feature of the culture-in-action framework illuminated by Swidler (1986) and others.

Applying the cultural-as-values model evident in Anderson's description of "streets" to violent offending, we arrive at an expectation that violence will be more common among some individuals primarily because they have internalized values that define aggression or violence as desirable or appropriate. Moreover, we expect that these individuals will be more prone to violently victimize others regardless of variations in the cultural values or socioeconomic conditions of the contexts in which they are located. In contrast, the culture-in-action perspective—evident in Anderson's "decents"—leads to the expectation that individuals' value orientations towards violence are not the full story. Rather, group-level value orientations also affect individual behavior, in multiple ways. One is direct. It suggests that in settings where group-level value orientations favor violence, individuals may be coerced or strongly encouraged to partake in such behaviors, regardless of their own personal orientation to violent behavior. Within such settings, the group-level codes favoring violence become cultural capital that is used by individuals to interpret situational cues and construct appropriate lines of action. Thus, in some cases, otherwise nonviolent individuals act out of character and aggress against others. In addition, group-values supportive of violent behavior may moderate the connection between an individual's values and their propensity to commit violence against others. More specifically, in a place or context where collective culture sees aggression and violence as desirable or beneficial, individuals with any non-zero violent value orientation will be more likely to act upon that orientation because they likely will encounter a greater number of interactional situations in which aggression against others is viewed as necessary and encouraged rather than inhibited.

School-Level Street Culture

Much of the theorizing on street codes invokes the neighborhood as the cultural setting. However, some work, as well as our own argument, suggests that street codes may be evident and measurable in a variety of group settings, including schools. In discussing street-code adoption, Anderson emphasizes the importance of staging areas—locations within communities where people interact and the cultural values are transmitted. In essence, these are public areas where behavioral codes develop and are practiced. Potential staging areas include establishments such as liquor stores or bars, the neighborhood basketball court, recreation centers, and *schools*. In fact, Anderson suggests that, "the hallways of the school are in many ways an extension of the street" (1999, p. 22). Work by Brunson and Miller (2009) supports this idea; their study of 38 African American boys indicated that adolescents use school as a public stage for showing dominance and gaining or maintaining status among their peers. The boys they studied indicated that conflicts occurring in school were about, "like who runs it...who's dominant between everybody....It's like a showcase here, you know, a lot of people, they just want people to watch 'em...they try to make theyself look hard" (p. 197).

In line with the idea that schools serve as staging areas, we invoke the idea that street codes observed in schools are likely to reflect the informal rules that dictate the behavior of students in their interactions with one another. We posit that schools, as well as the individual students within them, vary in the strength of their commitment to violence-supportive behavioral expectations. Like Anderson and others (e.g., Stewart & Simons, 2010) we posit that school-based street culture can potentially influence behavior in various

ways. First, individual adherence to street codes place students at a higher risk for involvement in delinquency—this would be an effect of individual attitudes, or culture as values. Second, school-level street culture can exert contextual effects on individual involvement in delinquency, especially situational violence, above and beyond the students' belief in street codes. If school-level street culture does have a significant influence on violent offending, while controlling for individual-level street codes, this supports the notion of contextual cultural effects and consistent with a culture-in-action perspective that assumes context matters. Finally, both individual- and school-level street codes might be related to student violence in certain situations or settings (i.e., those that provide greater crime opportunity—that is, in certain situations, it is likely to be more advantageous than other for an individual to use behavior in line with street codes). If the effects of street codes vary across setting, this finding also supports a culture-in-action perspective.

What situational factors might moderate the effects of individual or school codes on student violence? The school itself, though theorized as a potential public staging area where street codes can form, generally offers a less opportune setting for the actual enactment of such codes. For example, most schools structure the activity and movement of students throughout the day, offer plentiful adult supervision, and have formal punishment systems in place. Hence, somewhat paradoxically, it is quite likely that street codes, even those that are emergent collective properties of the school context, might have stronger effects on violent behavior of students when they are operating *outside* of the school's confines as opposed to within it. Indeed, although respondents in Brunson and Miller's (2009) study indicated that tensions between students often escalated during school hours, the conflicts and tensions did not result in violence until after school, and outside of school. Conflicts were sometimes intentionally handled outside of school—because there was less likelihood for intervention.

That said, there is surely variation in the degree to which the school location is avoided as a setting for settling disputes by students with a non-zero adherence to street codes and/or students enmeshed in a strong school-level street culture. In this study, we examine the extent to which two characteristics of schools—disadvantage and efficacy—moderate the effects of street codes. Disadvantaged schools likely offer fewer buffers against the violence-conducive effects of individual- or school-level street codes. Schools with greater levels of disadvantage are more likely to be understaffed or staffed by teachers and administrators who are less experienced or skilled in squelching disputes between students (Gottfredson, 2001). Hence, school disadvantage would likely enhance individual- and school-level street codes effects on student violence. In contrast, greater school efficacy would likely attenuate individual and collective street code effects on the likelihood that students will violently victimize others. Schools with strong school efficacy have teachers, administrators, and students who exhibit shared values and goals for the school and are able to uphold those values through effective socialization and control (e.g., see Payne et al., 2003). As such, schools with strong efficacy should provide less opportunity for individuals enact violent cultural codes that they personally subscribe to or that may be shared by many peers in the school setting.

Individual and Contextual Cultural Influences on Violence: Prior Research

Initial studies testing Anderson's street code theory focused solely on the impact that individual-level street code adherence had on offending, with results that were largely supportive of expectations (e.g., Brezina et al., 2004; Stewart & Simons, 2006). More recently, researchers have examined how neighborhood-level and individual-level measures of street codes affect criminal offending, providing more insight into the merit of the culture-as-values and culture-in-action perspectives. For example, using data on 726 African American children aged 12 to 15 from the Family and Community Health Study (FACHS), Stewart and Simons (2010) reported that individual-level adherence to the street code and neighborhood-level street culture were significant predictors of violent delinquency, net of controls for previous violent delinquency, neighborhood disadvantage, and neighborhood crime. In addition, they reported a significant cross-level interaction effect between adolescents' adherence to the code and neighborhood street culture. Specifically, individual adherence to the code had a stronger positive association with violent delinquency in neighborhoods where the street code was more pervasive (i.e., at the aggregate level) in comparison to neighborhoods where the code was less apparent. Thus, the work of Stewart and Simons (2010) provides some support for both culture-as-values and culture-in-action perspectives. While individual values did affect behavior, their effects were conditioned by context. Moreover, neighborhood-level street culture affected violence net of the impact of individual values.

Other work examined additional situations or contexts in which street codes might be more influential on victimization. For example, McNeeley and Wilcox (2015) found that the street code had a stronger effect on victimization for those that had more public lifestyles. Further, the effect of this interaction between street codes and public lifestyle was even stronger in social disorganized neighborhoods. The findings reported in McNeeley and Wilcox (2015) informs our study by highlighting how opportunity and context (in the form of lifestyle, social disorganization) help shape the association between street codes and violence, providing suggestive support for the culture-in-action perspective.

While most of the existing empirical research on street codes and culture have focused on communities as the aggregate social context, limited research has investigated street codes and culture effects in other aggregate contexts, especially schools. Using the first two waves of the Youth in Transition (YIT) data set, Felson et al. (1994) found that individual-level adherence to a code of violence was significantly related to offending, measured by a combination of in- and out-of-school delinquency items. Additionally, that study reported that net of individual adherence to a subculture of violence, school-level measures of subculture of violence also influenced individual delinquency. As we have argued above, the culture-as-values perspective would not expect school context to influence students' behavior above and beyond the student's individual values. Hence, support for the culture-in-action perspective is apparent.

Although it focused on verbal aggression against students and teachers, as opposed to delinquency, Brezina et al.'s (2001) analysis of the YIT data is consistent with the findings of Felson et al. (1994). Specifically, Brezina et al. (2001) found that school-level approval of aggression was significantly related to male students' propensity for verbal aggression and

arguing with other students and teachers. This effect was net of individual-level approval of aggression. The authors state, “In addition to any internal pressure caused by personal adherence to aggression-oriented values, students may feel external pressure to engage in aggressive behaviors when such acts are valued by schoolmates....” (p. 375). Thus, because context is important, Brezina et al.’s findings also appear to be more supportive of a culture-in-action perspective compared to a culture-as-values perspective.

In a later study, Ousey and Wilcox (2005) examined the influences of school-level street culture, net of individual-level adherence to delinquent values, on a measure of *in-school* youth violence using the first wave of the Rural Substance Abuse and Violence Project—the same data used in the present study. Ousey and Wilcox’s HLM analysis revealed significant cross-school variation in violence. However, a contextual effect of school-level street culture was not apparent when they controlled for all individual-level variables. Meanwhile, the individual-level variable measuring the respondent’s acceptance of norms advocating situational violence was significant. Their analysis thus indicated that it was an individual’s adherence to a violent code that predicted their violence, not a contextual code of violence measured at the school-level. Therefore, results from their study appear more supportive of a culture-as-values as opposed to a culture-in-action perspective.

The findings reported in Ousey and Wilcox (2005) are thus at odds with studies analyzing the YIT data, most notably the study of delinquent offending by Felson et al. (1994). There are a number of possible reasons that exist for the contradiction, including the use of different samples, different modeling strategies, and different measures. For instance, it is noteworthy that Felson et al. (1994) employed a measure of offending that incorporated both in-school and out-of-school activity. Ousey and Wilcox (2005), on the other hand, only measured violence that occurred *within schools*. Therefore, one possibility is that the effects of school-level culture are most pronounced on delinquency that occurs outside of school, which was picked up in the Felson et al. (1994) measure but not in the measure employed by Ousey and Wilcox. Ousey and Wilcox (2005), in fact, suggest that since schools are often tightly-controlled and regimented contexts compared to community settings, they provide fewer opportunities for the expression of the normative expectation of “payback.” Thus, consistent with our earlier discussion of the Brunson and Miller (2009) research, they leave open the possibility that contextual-level cultural effects on violence would more likely become manifest outside of school, a line of reasoning that invokes the logic of the culture-in-action perspective.

Following this logic, we posit that the influence of street codes and culture may actually be expressed by youth more fully outside of school. In other words, confrontations that begin in the school setting, and that call for anti-social retaliation according to a street code, may not be expressed until students are outside of school confines, where greater opportunity exists for violent confrontations to play out uninterrupted. If this were to be empirically supported, it would imply that cultural influences are contextual and conditional, thus further supporting a culture-in-action perspective. As described in more detail below, this hypothesis about the differential relationship between school-level street culture and students’ violent offending in-school versus out-of-school is directly tested in the present study. Further, we recognize in this study that features of the school, including levels of

disadvantage and efficacy, might impact the opportunity for enacting street culture and thus would likely condition the effects that street culture has on the likelihood that students will engage in violence against others.

THE PRESENT STUDY

Drawing on the theoretical debate between the culture-as-values and culture-in-action perspectives, the present study examines the independent effects of individual-level street codes and school-level street codes while also exploring whether contextual characteristics affect the nature of the relationship between street codes (at both levels) and student violence. Regarding the latter objective, we estimated whether the effects of individual- and school-level street codes on student offending vary according to: (1) the location of the offending—in-school versus out-of-school; (2) school-level disadvantage; and (3) school-level efficacy.

The culture-as-values perspective posits an effect of individual street values only, and it seemingly predicts that these effects are invariable across context. In contrast, the culture-in-action perspective suggests that the school likely provides a unique context where adolescents spend a significant amount of time interacting with one another, thus fostering the articulation of a recognizable culture. Further, it suggests that the effects of both individual- and school-level street codes may more prominently affect behavior outside of school due to there being greater opportunities to successfully enact street codes without interference from school authority figures. However, certain school characteristics—including disadvantage and efficacy—might affect the situational opportunity for enacting street codes *in school* according to the culture-in-action perspective. For example, disadvantaged school contexts likely fuel the enactment of such codes, whereas schools with strong efficacy likely hamper their enactment. Hence, this perspective would seemingly expect the effects of individual- and school-level street codes on in-school violent student offending to be greater in disadvantaged schools and attenuated in schools with strong efficacy.

Overall, we developed the following hypotheses to test key arguments that emerge from the culture-as-values and culture-in-action perspectives:

- H1:** Individual street codes will be positively related to violent offending, and these effects will be independent of context (culture as values).
- H2:** School-level street codes will be positively related to violent offending, net of individual values. However, these effects of school-level street codes will be contingent upon context. The effects of individual-level street codes will also be contingent upon context (culture in action).
 - H2a:** Individual -level street codes will have a stronger positive association with violent offending that occurs outside of school as opposed to violent offending in school.

- H2b:** School -level street codes will have a stronger positive association with violent offending that occurs outside of school as opposed to violent offending in school.
- H3:** Effects of individual-level and school-level street codes on in-school offending will vary as a function of the level of school disadvantage or the level of school efficacy (culture in action).
- H3a:** Individual-level street codes will have a stronger positive association with in-school violent offending as school disadvantage increases.
- H3b:** School-level street codes will have a stronger positive association with in-school violent offending as school disadvantage increases.
- H3c:** Individual-level street codes will have a stronger positive association with in-school violent offending as collective efficacy decreases.
- H3d:** School-level street codes will have a stronger positive association with in-school violent offending as collective efficacy decreases.

Data

The present study uses student and teacher survey data from the *Rural Substance Abuse and Violence Project (RSVP)*, funded by the National Institute of Drug Abuse (DA-11317). This was a prospective longitudinal study conducted between the years of 2001 and 2004. For the present study, all four waves of the student component of the RSVP were used. The student data consist of annual survey responses from a panel of students who were enrolled in seventh grade during the 2000–2001 academic year. A total of 9,488 seventh graders were contained within the 65 participating schools, and all were targeted for inclusion in the sample. Active parental consent was obtained for 4,102 of the targeted students, for a 43% response rate. Completed surveys were received 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. Overall, there was participation from 3,976 students in one or more waves of the study.

On the same day that student surveys were administered, an additional survey was group-administered to teachers in each school containing students in the sample. The teacher survey focused largely on perceptions of various aspects of the school climate, including perceptions of disorder, crime, and social integration among and between students, parents, teachers, and administrators. In total, approximately 4,500 teacher surveys were completed over the course of the study. To create the school-level measures of efficacy, individual teacher perceptions about these aspects of climate were aggregated within schools and linked to individual respondents based on the school they were attending in any given year. Finally, several additional school-level enrollment and demographic characteristics were measured utilizing data from the Kentucky Department of Education.

The 3,976 students who provided data in at least one wave were embedded within a total of 111 unique school contexts over the course of the four-year study, as most students crossed from an elementary or middle school to a high school at some point during the study. Eight schools were dropped from the analysis because they contained fewer than twenty survey

respondents or because school-level measures were unavailable. In total, our analyses are based on roughly 11,000 person-years (up to 4 waves of data for approximately 3,600 students located in 103 school contexts). Using these data, we estimated three-level hierarchical ordinal logit models with repeated measures (level 1) nested within individuals (level 2), who are, in turn, nested within school contexts (level 3).

Measures of Variables

Dependent Variables—The present analysis uses six dependent variables: (1) in-school physical assault; (2) out-of-school physical assault; (3) in-school robbery; (4) out-of-school robbery; (5) in-school sexual battery; and (6) out-of-school sexual battery. In-school physical assault is measured with the survey item, “In the present school year how often have you physically attacked someone *at school* (punched, slapped, kicked)?” This item had an associated ordinal scale ranging from 1 = “never” to 5 = “daily or almost daily.” Descriptive statistics shown in Table 1 reveal that, on average, the in-school physical assault score was 1.26. Out-of-school physical assault uses a similar item, but one that asks about punching, slapping, and kicking that occurred outside of school during the current academic year. On average, the out-of-school physical assault score

In-school robbery was measured as a single-item based on respondents’ reports of how often, during the current school year, they had “forced someone *at school* to give up their money or property?” The response to this item was, once again, an ordinal scale ranging from 1 = “never” to 5 = “daily or almost daily.” Out-of-school robbery was measured by using a similar single-item but in reference to theft that occurred out of school. The average scores for the in-school and out-of-school robbery item were 1.06 and 1.08, respectively.

While Anderson’s code of the street thesis emphasizes the implications of the code for physical violence, usually among men, he also suggests that the code promotes sexual prowess, sometimes promoting males to use aggressive sexual behavior. Jody Miller’s (2008) detailed qualitative analysis in the book, *Getting Played*, draws further attention to this issue. Miller (2008) found that behavioral codes, expressed both on the street and in school settings among disadvantaged youth, promote the perpetuation of violence from males toward females. Specifically, embedded within the codes are norms regarding sexual and physical harassment/assault of young women. Therefore, in the present study, we also examine the relationship between street codes and sexual violence. In-school sexual battery was measured using the single-item “In the present school year, how often have you touched someone in a sexual manner without their consent or against their will at school?” Again, the item had an associated ordinal scale ranging from 1 = “never” to 5 = “daily or almost daily.” On average, the level of in-school sexual battery was 1.13. We also used a similar item specific to out-of-school sexual battery (mean = 1.15)

Level-1 Independent Variables—As discussed in more detail later, our analysis is structured as a three-level multilevel model, with right-hand side predictor variables included at each level. At level 1, repeated (i.e., wave-specific) measurements for each of the respective violence variables described above is modeled as a function of the variable “wave,” the scores on which reflect the timing of the observation. The original coding of this

variable ranged from 1 to 4, with the score of 1 reflecting observations obtained in the first wave of the study (i.e., 2001) and scores 2–4 representing observations obtained in the three subsequent study waves (i.e., 2002, 2003, 2004, respectively). For our analysis, we centered the wave variable around the value 2.5 or the midpoint of the time period for which the observations are recorded¹.

Level-2 Independent Variables—At level 2, our primary interest lies in explaining between-individual variation in violent offending rather than within-individual changes over time. Consequently, our level-2 (individual-level) explanatory variables measure between-individual variation in street codes as well as a number of salient control variables. For each of the individual-level variables that are time-varying, we averaged an individual’s scores on that measure across the waves of observation.

To gauge the individual-level impact of street codes on violent offending, the key independent variable in the level-2 portion of our model is individual adherence to street codes. It is constructed by summing responses to eight survey items that ask respondents how much they agreed (on a four-point scale) with a series of statements. These statements tap the willingness to use violence under certain circumstances and a general set of antisocial values. Specifically, the eight items used to create the street code measure include: (1) In order to gain respect from your friends, it is sometimes necessary to beat up other kids; (2) It is alright to beat up another person if he/she called you a dirty name; and (3) It is alright to beat up another person if he/she started the fight; (4) Hitting another person is an acceptable way to get him/her to do what you want; (5) It’s okay to break the law if you can get away with it; (6) To get ahead, sometimes you have to do things that seem wrong; (7) Most things that adults call “crime” don’t really hurt anyone; and (8) It’s okay to break the law if nobody is hurt by it. The scale of this variable ranged from 8 to 32 (mean = 12.88; s.d. = 4.12; Cronbach’s α = 0.88), with higher scores indicating individuals with stronger adherence to street codes².

Several additional student-level variables that extant theory and research suggests are related to offending were controlled for in our analysis: impulsivity, delinquent peers, assault victimization, robbery victimization, and sexual victimization, school attachment, parental attachment, parental socioeconomic status (SES), race and gender. Impulsivity was measured with the average score from an 11-item index assessing multiple dimensions of low self-control, including frustration, temper control, attention span, and restlessness (Cronbach’s α = .91). Each of the eleven items used a four-point Likert response scale (1 = low to 4 = high). Delinquent peer association was measured with a 17-item measure asking respondents whether their closest friends participated in a series of delinquent behaviors during the present school year (1 = yes, 0 = no). These behaviors included things such as drug and alcohol use, truancy, drunk driving, school suspension, carrying a weapon at school, being arrested, drug dealing, theft, assault, and vandalism. To calculate the respondents’ exposure to delinquent peers, the responses to these 17 dichotomous items were averaged (Kuder-Richardson reliability = .91).

²Hence, the random intercept from the level-1 equation reflects, for a given violent crime item, the offending propensity for individual i when wave = 0, in other words at the midpoint or “average” time point observed.

Paralleling our measures of offending, we included three distinct measures of victimization. Assault victimization was a dichotomous measure (1 = yes; 0 = no) that indicated whether the respondent had been pushed, punched, or kicked at school or during school-related activities, during the current school year. Robbery victimization was a dichotomous measure indicating whether the respondent had been forced to give up their money or property while at school or during school activities. Sexual battery victimization was a dichotomous measure indicating whether the respondent had experienced unwanted sexual touching at school or during school-related activities (1 = yes; 0 = no).

School attachment was measured with an index that averaged student responses across six items. The questions asked how strongly the students agreed or disagreed (on a four-point scale) with various statements about their relationships with teachers, the importance of education, and their attitudes towards school (Cronbach's $\alpha = .71$). Parental attachment was measured as the average of 24 items (Cronbach's $\alpha = .93$) that captured specific aspects of the respondents' relationships with both their mothers and fathers, including the level of love and respect, degree of communication, and level of supervision provided. Respondent socioeconomic status was measured as the average of mother's and father's educational attainment, with response categories ranging from 1 (completed grade school or less) to 7 (graduate or professional school). Respondent's race and gender were measured dichotomously (nonwhite = 1, white = 0; female = 1, male = 0).

Level-3 Independent Variables—The final level in our models address between-school differences in mean student offending. The primary variable of interest at level three is school-level street codes. Individual student scores on the measure of adherence to street codes, described above, were aggregated to the school-level to serve as the measure of school-level street codes. The mean for this measure was 12.86 (s.d. = 0.83), suggesting that school-level street codes leans more towards the conventional end of the continuum than the delinquent end and that there is modest variation in school-level street codes across schools included in the sample. Beyond the key measure of school-level street codes, a level-3 measure of school efficacy was constructed as the average of teacher's reports of the level of cohesion, trust, and cooperation at their school. This variable was created from responses to 19 survey items (Cronbach's $\alpha = .84$) asked the respondent to indicate to what extent they agreed with statements such as: "The administration and teachers collaborate toward making the school run effectively," "The administration is supportive of teachers," "Students don't really care about this school," and "Teachers and students get along well at this school." In addition, measures of school size, gender composition, racial composition and percent of students receiving free- or reduced-price lunches (school disadvantage) were constructed from Kentucky Department of Education statistics and controlled in the analyses that follow.

Analytic Strategy

Given that the RSVP dataset consists of repeated measures from students nested non-randomly within schools, we estimated three-level hierarchical ordinal logit models in version 14 of the STATA software. As noted, at level-1 we specify a measurement equation in which the repeated measures on a specific dependent variable (e.g., assault) for each individual and school is modeled as a function of time, or measurement wave. The level-1

intercept term reflects the average violent offense score (for the particular violent crime investigated) and is specified as randomly-varying across individuals (i.e., the level-2 units). That between-individual variation is then modeled as a function of between-individual differences in street codes and the individual-level control variables. The model also specified the level-2 intercept as varying randomly across the schools (the level-3 unit) in response to between-school variation in school-level street codes, school efficacy, and the other school-specific demographic variables³. Again, because our primary focus is on understanding between-individual and between-school variation in violent offending (and not within-individual change over time) we do not include within-person, time-varying measures of street codes in the level 1 equation.

Our analysis proceeded in a series of three steps. First, for each of our dependent variables we estimated a three-level “main effects” model that included the control for measurement wave (i.e., time), both individual- and school-level measures of street codes, and all relevant individual- and school-level controls. This first step enables us to discern the effects of individual- and school-level measures of street culture on offending within schools and outside of schools while accounting for within-person growth in violent offending and other theoretically relevant control variables. Second, we elaborated our analyses by adding interaction terms that examined how levels of school disadvantage moderated the effects of individual- and school-level street code measures on in-school violent offending. Last, we computed interaction terms that examined the extent to which variations in school efficacy conditioned the impact of individual- and school-street codes on in-school violence.

RESULTS

Street Codes and In-School versus Out-Of-School Violence

Table 2 displays results of models that estimate the main effects of all individual- and school-level variables on both in-school and out-of-school assault, robbery, and sexual battery. Looking first at the coefficient for the time/wave variable, which measures the mean rates of change in each of the measures of violence, we see a significant and negative coefficient in the models predicting both measures of assault (in-school and out-of-school) and the measure of robbery away from school. For these three outcomes, reported violence levels discernibly decline across the observation period. However, no significant trend is evident for the in-school measure of robbery or for the measures of sexual offending in either context.

Turning next to results of greater theoretical importance, we examined the effects of our central individual-level variable, individual adherence to street codes, on each of the violence measures. The results indicated that individual adherence to street codes had a positive and significant association with all three types of violent offending across both in-school and out-of-school settings. Thus, these initial findings are consistent with expectations from the culture-as-values framework, as posited in Hypothesis 1.

³Factor analysis was used to confirm that the eight measures used in this index were tapping the same construct. All items loaded on a single factor that accounted for 79% of the variance.

A number of individual-level control variables showed significant effects on both in-school and out-of-school violence, with varying degrees of consistency across crime type and location of offending. Among the in-school violent offending items, our measure of impulsivity was only significantly related to assault, with the coefficient suggesting that those students who were more impulsive had greater odds of assaulting others in the school setting. However, impulsivity had a significant positive relationship with all three measures of violent offending outside of the school setting. In contrast to the variation in effects observed for the impulsivity measure, we found that the effect of delinquent peer association was positive and significant across all of the in-school and out-of-school measures of violence. Thus, students who have more delinquent friends appear more prone to violently victimize others in numerous ways both inside and outside of school.

Previous experience as a crime victim also was predictive of an individual's involvement in violent behavior, though effects varied across types of violence. Experiencing a previous assault was associated with a significant increase in the risk of committing in-school and out-of-school assault against others, but assault victimization lowered odds of robbing others in school. Meanwhile, prior experience as a robbery victim significantly raised a person's odds of committing in-school and out-of-school robbery and of engaging in sexual battery outside of school. But robbery victimization was associated with decreased odds of committing out-of-school assault. Sexual victimization was related to higher odds of committing robbery and sexual battery across school and non-school settings.

Students that reported lower levels of school attachment were more likely to commit all six offense measures. In contrast, parental attachment was related to in-school robbery and out-of-school assault only. Specifically, students with weak attachments to parents were more likely to commit in-school robbery and out-of-school assault. SES was significantly associated (positively) with in-school and out-of-school sexual battery, indicating those students that come from higher SES families are more likely to be involved in sexual battery. Nonwhites were more likely to commit both in-school and out-of-school assault and robbery. Males were more likely to commit assault, robbery, and sexual battery than females, both in-school and outside of school.

Moving onto the effects of school-level (level-3) variables, our key variable was the school-level mean of street code values. The findings indicate that the effects of school-level street culture are inconsistent across the crime outcomes. First, among the measures of violent offending committed in-school, we found that schools in which street culture is more prominent at the school-level show higher odds of in-school sexual battery, net of the influence of individual street codes (and other controls). Regarding violence committed outside of the school setting, the school-level street culture had a significant positive association with both assault and sexual battery. Taken together, the evidence of independent school-level street culture effects and variability in these effects across school and non-school contexts appears to provide non-support for Hypothesis 2a yet some support for Hypotheses 2b, with both hypotheses deriving from the culture-in-action perspective. Though individual-level street codes had rather uniform effects across in-school and out-of-school contexts, school-level street culture exhibited effects on violence net of individual codes, and the effects of school-level street culture were somewhat more evident for the

outside of school measures of violence. The findings clearly contradict the culture-as-values model to the extent that we interpret it as predicting no unique partial effect of school-level street culture once individual values are controlled.

In terms of other school-level measures, school efficacy was significantly and negatively associated with both in-school and out-of-school robbery and sexual battery. Thus, on average the odds of those forms of violence are lower among individuals in schools in which school efficacy is greater. However, school disadvantage (percent free/reduced lunch) was found to be negatively associated with in-school robbery and sexual battery. In other words, students who attended a school with a higher proportion of students receiving free/reduced lunch are less likely to commit in-school robbery and both in-school and out-of-school sexual battery. School enrollment was also negatively associated with in-school robbery and both in-school and out-of-school sexual battery. Percent nonwhite was positively related to only one outcome, that being out-of-school assault. Percent male was not related to any of the six offending measures.

Moderating Effects of School Disadvantage on Street Codes

In the next portion of our analysis, we addressed whether school disadvantage moderated the effects of individual-level and school-level measures of street codes on in-school offending, testing Hypotheses H3a and H3b. We did this by adding two interaction terms to our three-level ordinal logit models of in-school offending: (1) a cross-level interaction between individual adherence to street codes and school-level percent of students on free/reduced lunch; and (2) an interaction between school-level street codes and percent of students on free/reduced lunch. The results of the interaction effects are displayed in Table 3. Note that the models included all other predictors presented in Table 2, but to save space, we omitted those other coefficients but point out that they are substantively the same as those reported in Table 2⁴.

The results shown in Table 3 indicate that the interaction term between individual street codes and the percent free/reduced lunch was negatively associated with in-school assault ($b = -0.001, p < 0.10$). This effect, while marginally significant, is nonetheless unexpected. It implies that the effect of individual street code values on in-school assault is *weaker* when school disadvantage is higher. This interaction effect does not appear to line up well with our reading of either the culture-as-values or the culture-in-action perspectives. The fact that the effect of individual street values is moderated at all is at odds with the culture-as-values perspective. On the other hand, the finding that individual street values appear more weakly related to in-school assault in presumably more opportunistic school contexts is inconsistent with Hypothesis H3a and the culture-in-action perspective.

In contrast, we found that the effect of school-level street codes on in-school robbery was stronger when school disadvantage was higher ($b = 0.015, p < 0.10$). Thus, it appears that disadvantage does condition the effect of school-level street culture on at least some

⁴In unconditional models the intra-class correlations at the school-level are .037, .060, and .055 for the “at-school” assault, robbery, and sexual assault measures, respectively. For the “not at school” violent offending items, the corresponding intra-class correlations are .057, .043, and .052.

offending behaviors, with school-level street culture having more influence on robbery in disadvantaged school contexts where there may be fewer institutional constraints on the expression action strategies that involve violence. This finding is consistent with Hypothesis 3b and a culture-in-action perspective.

Moderating Effects of School Efficacy on Street Codes

The last step of the analysis was to test Hypotheses H3c and H3d by exploring possible interaction effects between individual- and school-level street codes and school efficacy in the estimation of in-school violent offending. Once again, we only report fixed effects for the interaction terms in Table 4, though these effects were part of larger models in which fixed effects for all independent variables were also included. As before, nearly all of these fixed effects were substantively the same as those reported in Table 2². The results in Table 4 indicate that the effects of individual street codes were independent of school efficacy, thus providing little support for Hypothesis H3c. In contrast, the effects of school-level street culture were slightly more interdependent with collective efficacy. Specifically, the interaction between school-level street culture and school efficacy was negatively associated with in-school robbery ($b = -0.562, p < 0.10$). Thus, the effect of school-level street culture on in-school robbery declined as school efficacy increased. These results provide some support for the notion that school efficacy provides less opportunity for students to enact school-level cultural codes, especially for robbery. Such findings are consistent with Hypothesis H3d, and thus provide modest evidence supportive of a culture-in-action perspective.

DISCUSSION

The general focus of the present study was to examine the influence of culture on student violent offending using the culture-as-values and culture-in-action frameworks. We examined the effects of both individual- and school-level street codes, net of one another. Further, we explored whether these effects were conditioned by context. In particular, we were interested in whether street codes have a stronger influence on offending in contexts that provide more opportunity for these street codes to be enacted. Contextual effects of street codes (both direct and conditional) were posited as supportive of the culture-in-action perspective as opposed to the culture as-values approach which, in its pure form, would expect individual codes to be paramount and context to be irrelevant.

Regarding the test of hypotheses stemming from these alternative perspectives, it is noteworthy, first, that students' individual adherence to street codes was influential for all types of violent offending regardless of whether the violence occurred in or out of school. Such findings are thus supportive of Hypothesis 1—aligned with the culture-as-values perspective—that individual street codes should be positively related to offending and independent of context.

That being said, there was also some support for Hypothesis 2—consistent with the culture-in-action perspective—that school-level street culture significantly affects violent offending behaviors *net of individual adherence to street codes*. Specifically, in three of the six models estimated, the school-level street culture measure had a significant effect on violence,

independent of the effects of individual-level street codes. Moreover, in two of the three models for which the school-level street culture was found to have significant effects, the violent behavior occurred outside of the school setting. Some support thus exists for the idea that school-level street culture can exert contextual effects above and beyond individual values and that the effects of school-level street culture on offending are situational. These findings suggest that there may be more immediate opportunities to express the norms of a street culture outside of the controlled confines of school (Brunson & Miller, 2009; Ousey & Wilcox, 2005). Specifically, for assault, our analysis suggests that the out-of-school context provides more opportunities for the use of physical violence as a response to a conflict.

On the other hand, school-level street culture significantly influenced both in-school and out-of-school sexual battery. Thus, in-school versus outside-of-school context does not seem to affect the enactment of street culture in regards to this particular form of violent conduct. There are a few possible explanations for why this type of offending may not be affected in the same manner by in-school versus out-of-school context. First, our measurement of sexual battery may account for these findings, which are, on the surface, less supportive of culture-in-action predictions. The survey question tapping sexual battering in the RSVP study assesses “inappropriate sexual touching”—behavior that can occur very discreetly in school spaces. Thus, it is plausible that opportunity constraints provided by teachers and school administration would be less successful in attenuating sexual touching in comparison to less discrete offenses, including physical fighting. Also, Miller’s (2008) research highlights that many females in schools that strongly adhere to a street code are likely to experience sexual harassment and even unwanted touching as the norm. The young women Miller interviewed often referred to the males at school as “playin’ too much.” Miller’s findings thus lend support for the idea that there might be more opportunity for sexual battery in school contexts than one might wish to think. If opportunities for sexual battery are indeed plentiful in school contexts, especially in those with an evident street culture, then we would in fact expect fewer differences in the effects of street culture on in-school versus out-of-school sexual battery.

Consistent with aspects of the third hypothesis (i.e., H3), we also found some support for the argument that measures of school context may serve to condition the effects of school-level street culture on students’ *in-school* offending. Specifically, the present study explored whether variation in levels of school disadvantage and school efficacy moderated the effects of street codes on in-school student offending. Findings suggest that, for at least some types of violent offending at school—robbery, in particular— students are more likely to enact a school-based street culture if they attend schools that are more disadvantaged or schools where school efficacy is especially low. Collectively, the evidence of independent main effects of “school-level street culture” and of interaction effects between the school-level street culture and school disadvantage and school collective efficacy contradict the culture-as-values perspective and lend more support to the culture-in-action perspective. In other words, we provide some evidence suggestive of the idea that culture has an independent contextual component that leads individuals to vary their behavior situationally. Quite simply, it appears here that variations in contexts may impose interactional constraints that shape the expression of street codes values.

Altogether, the various findings presented here illustrate that: (1) culture, in the form of individual values, does exert strong effects which are largely consistent across a variety of contexts; yet (2) schools can serve as a prime context for the development of a culture supportive of violent offending, even if that offending occurs outside of the actual confines of school or varies according to other situational attributes (i.e., disadvantage and efficacy). Thus, a multi-pronged approach to crime prevention aimed at students is supported by the findings. For instance, since individual-level adherence to street codes was more consistently related to offending than was school-level street culture, school-based prevention aimed at altering *individual cognition* regarding alternative behaviors is strongly supported (Gottfredson, 2001; Gottfredson, Cook, & Na, 2012). At the same time, since school culture did display some contextual effects, continued funding and use of school programs designed to change the environment of schools is also supported. The prevention literature consistently points to a number of examples of successful programs aimed at strengthening conduct norms and rules for behavior *at the school level* (see, e.g., Gottfredson 2001; Gottfredson, Cook, & Na, 2012; Sherman, et al., 1997). The results from the current study support the continued use of such programs. Additionally, since the influence of school-level street culture was sometimes enhanced by school disadvantage and attenuated by school efficacy, the results of this study also support school-level policy aimed at “lifting up” disadvantaged schools and increasing school-level efficacy. For example, our findings are compatible with the promise shown by programs that foster communal school organization (e.g., see Payne et al., 2003) or similarly effective organizational change, especially in poorer districts. In brief, our findings support a multilevel approach to prevention of school-based offending, tackling both individual- and school-level normative influence. Such implications are consistent with recent work implying the value in multilevel approaches to reducing school-based victimization, risk perception, and fear of crime (Tillyer, Fisher, & Wilcox, 2011).

While the current study addressed important theoretical and policy-relevant research questions regarding cultural influences on delinquency, there are several study limitations that deserve attention and that necessitate cautious use of our findings. First, though we nested repeated measures within individuals, and in turn, nested individuals within school contexts, we estimated contemporaneous rather than lagged effects of school culture on offending in that measures of independent variables are based on average scores across the waves. While we think our specification is justified in relation to our theoretical framework, the study is nonetheless limited in that it is not possible to determine with certainty the temporal order between school-level street codes and student violent offending. In short, conclusions about correlations can be made, but assertions of causality cannot be made.

Measurement limitations also qualify our results. In particular, our measure of school-level culture was constructed as the group-mean of the individual-level adherence to street codes. Unfortunately, while the data used for the present study does include some measure from teachers, there were no items on the teacher survey tapping a school-based culture. Therefore, future work in this line of research would benefit from using an independent measure of school-based culture, perhaps drawing upon data from teachers and/or school administrators for an alternative measure. Our measurement of school-level street culture was also limited in another important respect. Previous qualitative work studying the role of

culture on delinquency has described the effects of school and community culture as intertwined or overlapping. Yet, the data used in this analysis do not permit the measurement of culture at the community level. Therefore, it is not possible to estimate the effects of a school-level street culture distinct from or overlapping with the effects of a community culture. However, for the purposes of our study, this distinction is not altogether important. Rather, the key implications are that schools have cultures that we assume (but cannot demonstrate) overlap with community cultures (i.e., the idea of schools as staging areas), and that exert influence on student offending, net of students' individual values. Yet, future work might seek to understand more clearly the distinctiveness and potentially unique influences of school and community cultures.

Despite its limitations, the current study highlights the importance of considering multiple perspectives when it comes to cultural influences. Individual values are very important, but collective codes are also influential. Neighborhood-based codes of the street have received much attention in this regard, yet our study highlights that other contexts beyond the community can play a role in understanding offending outcomes on the basis of cultural influence. Further, this research provides support for the notion that contextual (school-level) cultural effects vary based on the location, and characteristics of the location in which the offense occurs. Thus opportunity contexts appear to matter when it comes to the enactment of school-level street culture in the form of offending. Overall, the current study supports both the culture-as-values and culture-in-action perspectives; students do act on the basis of values but they also appear to use a collectively-generated behavioral "tool kit" situationally.

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Table 1:

Descriptive statistics for variables in the analysis

	Mean	S.D.	Minimum	Maximum
Assault at School	1.26	0.73	1.00	5.00
Assault Not at School	1.35	0.84	1.00	5.00
Robbery at School	1.06	0.39	1.00	5.00
Robbery Not at School	1.08	0.47	1.00	5.00
Sexual Battery at School	1.13	0.57	1.00	5.00
Sexual Battery Not at School	1.15	0.62	1.00	5.00
Wave	2.35	1.10	1.00	4.00
Street Codes-Individual	12.88	4.12	8.00	32.00
Impulsivity	1.81	0.55	1.00	4.00
Delinquent Peers	0.26	0.19	0.00	1.00
Assault Victimization	0.38	0.36	0.00	1.00
Robbery Victimization	0.07	0.18	0.00	1.00
Sexual Victimization	0.31	0.34	0.00	1.00
School Attachment	3.17	0.45	1.00	4.00
Parent Attachment	3.73	0.65	1.00	5.00
SES	4.30	1.46	1.00	7.00
Race (Nonwhite=1)	0.10	0.28	0.00	1.00
Sex (Female=1)	0.53	0.50	0.00	1.00
Street Codes-School Mean	12.86	0.83	11.06	14.93
Percent Free Lunch	38.30	17.84	3.00	93.00
Percent Nonwhite	10.52	12.33	0.00	52.77
School Efficacy	3.65	0.36	2.84	4.37
School Enrollment	807.22	396.00	109.00	2051.00
Percent Male	51.39	2.65	43.82	59.25

Table 2:

Three-level ordinal logit models predicting offending outcomes

	At School			Not at School		
	Assault	Robbery	Sexual	Assault	Robbery	Sexual
Wave	-0.233 [*] (0.048)	-0.033 (0.101)	0.093 (0.063)	-0.404 [*] (0.037)	-0.226 [*] (0.076)	0.011 (0.061)
Person-Level Measures						
Street Codes	0.111 [*] (0.011)	0.138 [*] (0.019)	0.092 [*] (0.014)	0.121 [*] (0.011)	0.110 [*] (0.016)	0.101 [*] (0.012)
Impulsivity	0.462 [*] (0.071)	0.256 (0.162)	0.160 (0.104)	0.490 [*] (0.065)	0.401 [*] (0.121)	0.357 [*] (0.099)
Delinquent Peers	1.678 [*] (0.202)	1.692 [*] (0.391)	2.014 [*] (0.287)	2.339 [*] (0.223)	1.734 [*] (0.340)	1.896 [*] (0.258)
Assault Victimization	2.350 [*] (0.137)	-0.547 [*] (0.274)	-0.017 (0.178)	1.674 [*] (0.102)	-0.049 (0.207)	-0.027 (0.153)
Robbery Victimization	-0.090 (0.202)	2.260 [*] (0.307)	0.119 (0.209)	-0.330 ⁺ (0.192)	1.636 [*] (0.236)	0.386 ⁺ (0.201)
Sexual Victimization	-0.025 (0.111)	0.639 [*] (0.239)	2.023 [*] (0.196)	-0.027 (0.106)	0.380 [*] (0.191)	1.855 [*] (0.188)
School Attachment	-0.178 [*] (0.089)	-0.647 [*] (0.192)	-0.419 [*] (0.127)	-0.184 [*] (0.087)	-0.483 [*] (0.127)	-0.369 [*] (0.151)
Parent Attachment	-0.086 (0.065)	-0.209 ⁺ (0.116)	-0.096 (0.095)	-0.090 ⁺ (0.054)	-0.156 (0.096)	-0.142 (0.086)
SES	-0.005 (0.030)	-0.051 (0.052)	0.108 [*] (0.039)	-0.001 (0.030)	0.017 (0.046)	0.136 [*] (0.042)
Race (Nonwhite=1)	0.624 [*] (0.113)	0.439 ⁺ (0.234)	0.207 (0.216)	0.472 [*] (0.136)	0.380 [*] (0.184)	0.275 (0.181)
Sex (Female=1)	-0.293 [*] (0.091)	-1.398 [*] (0.197)	-1.892 [*] (0.152)	-0.257 [*] (0.086)	-0.865 [*] (0.147)	-1.592 [*] (0.146)
School-Level Measures						
Street Codes	-0.014 (0.058)	0.095 (0.136)	0.319 [*] (0.085)	0.112 [*] (0.049)	0.075 (0.088)	0.344 [*] (0.085)
School Efficacy	-0.173 (0.132)	-0.638 [*] (0.310)	-0.668 [*] (0.178)	-0.056 (0.097)	-0.406 [*] (0.194)	-0.498 [*] (0.172)
Percent Free Lunch	0.002 (0.003)	-0.010 ⁺ (0.006)	-0.012 [*] (0.004)	0.000 (0.003)	0.001 (0.004)	-0.009 [*] (0.004)
Percent Nonwhite	-0.002 (0.005)	0.002 (0.010)	-0.001 (0.006)	0.009 [*] (0.003)	0.001 (0.006)	-0.002 (0.005)
School Enrollment (in thousands)	0.015	-0.412 ⁺	-0.199	0.046	0.064	-0.141

	At School			Not at School		
	Assault	Robbery	Sexual	Assault	Robbery	Sexual
	(0.121)	(0.234)	(0.170)	(0.100)	(0.194)	(0.168)
Percent Male	0.018	-0.034	-0.010	-0.008	-0.030	-0.019
	(0.016)	(0.034)	(0.021)	(0.012)	(0.023)	(0.021)
Random-Intercept Variance						
School-Level Variance	0.047 ⁺	0.278 [*]	0.070	0.048	0.060	0.078 ⁺
	(0.025)	(0.118)	(0.051)	(0.033)	(0.061)	(0.047)
Person-Level Variance	1.249 [*]	1.525 [*]	1.306 [*]	1.409 [*]	1.263 [*]	1.576 [*]
	(0.190)	(0.439)	(0.266)	(0.181)	(0.314)	(0.312)
N (Total Observations)	11,144	11,168	11,177	11,152	11,175	11,169
N (Persons)	3,648	3,646	3,648	3,645	3,647	3,647
N (Schools)	93	93	93	93	93	93

Standard errors in parentheses.

⁺ p < .10

^{*} p < .05.

Ordinal logit thresholds not shown.

Table 3:

Three-level ordinal logit models with street codes by percent free lunch interactions

	Offending At School		
	Assault	Robbery	Sexual
Interaction Effects			
Ind. Street Codes x Pct. Free Lunch	-0.001 ⁺ (0.000)	-0.000 (0.001)	-0.001 (0.001)
Sch. Street Codes x Pct. Free Lunch	0.003 (0.004)	0.015 ⁺ (0.008)	-0.005 (0.007)
Random Intercept Variance			
School-Level Variance	0.045 ⁺ (0.024)	0.272 [*] (0.109)	0.060 (0.055)
Person-Level Variance	1.244 [*] (0.191)	1.446 [*] (0.438)	1.301 [*] (0.267)
N (Total Observations)	11,144	11,168	11,177
N (Persons)	3,648	3,646	3,648
N (Schools)	93	93	93

Standard errors in parentheses.

⁺
p < .10^{*}
p < .05.

Table 4:

Three-level ordinal logit models with street codes by school efficacy interactions

	Offending At School		
	Assault	Robbery	Sexual
Interaction Effects			
Ind. Street Codes x Sch. Efficacy	0.007 (0.022)	0.027 (0.043)	-0.011 (0.026)
Sch. Street Codes x Sch. Efficacy	0.022 (0.157)	-0.562 ⁺ (0.301)	-0.249 (0.205)
Random-Intercept Variance			
School-Level Variance	0.047 ⁺ (0.025)	0.233 [*] (0.118)	0.062 (0.049)
Person-Level Variance	1.249 [*] (0.190)	1.544 [*] (0.444)	1.307 [*] (0.266)
N (Total Observations)	11,144	11,168	11,177
N (Persons)	3,648	3,646	3,648
N (Schools)	93	93	93

Standard errors in parentheses.

⁺ p < .10^{*} p < .05.