UNRAVELING THE CONTEXTUAL EFFECTS ON STUDENT SUSPENSION AND JUVENILE ARREST: THE INDEPENDENT AND INTERDEPENDENT INFLUENCES OF SCHOOL, NEIGHBORHOOD, AND FAMILY SOCIAL CONTROLS*

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Scholars of human development argue that a variety of social contexts affect youth development and that the interdependency of these contexts bears on the shape of human lives. However, few studies of contextual effects have attempted to model the effects of school, neighborhood, and family context at the same time, or to explore the relative and interdependent impact of these contexts on youth outcomes. This study provides an examination of the independent and interdependent influences of school, neighborhood, and familial contexts through an analysis of student suspension and juvenile arrest. Findings reveal that school-based and family-based informal social controls additively combine to reduce the likelihood of suspension and arrest. Moreover, for suspension, results support the hypothesis that an interdependent compensatory relation is present between the extent of collective efficacy in

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> *schools and in the surrounding neighborhood; school collective effi-*
> *cacy has a controlling influence on the likelihood of suspension that*
> *becomes even stronger in the absence of neighborhood collective effi-*
> *cacy. However, for arrest, an accentuating effect of school-based social*
> *controls exists rather than a compensatory effect. A lack of neighbor-*
> *hood collective efficacy and a lack of school-based social controls com-*
> *bine to exert a substantial increase in the likelihood of arrest.*

Shaw and McKay (1942) recognized long ago that delinquency is more likely to occur in socially disorganized neighborhoods where disorganization refers to the breakdown in neighborhood institutions such as families and schools. Similarly, Kornhauser (1978) argues that attention should be placed on the relations among neighborhood institutions and notes that social disorganization and delinquency are more likely to occur in neighborhoods where social institutions are isolated from each other. For instance, if schools are isolated from the larger community and do not respond to the needs of the community, then communities lack a key mechanism of social control. More generally, scholars of human development argue that a variety of social contexts influences development and that the interdependency of these contexts impacts the shape of human lives (e.g., Bronfenbrenner, 1989; Bronfenbrenner and Ceci, 1994). However, few studies of contextual effects have attempted to model the effects of school, neighborhood, and family context at the same time, or to explore the relative and interdependent impact of these contexts on behavior.

The lack of multicontextual research on youth development and behavior is most certainly caused by data limitations in previous research as well as by the methodological complexities of measuring and estimating the impact of numerous social contexts. What are the potential repercussions for understanding youth development and behavior when researchers focus their examination on one social context (e.g., neighborhoods) to the neglect of other contexts (e.g., schools)? With respect to the neglect of school effects, Arum (2000: 401) asserts that researchers are implicitly, or explicitly, making the assumption that schools vary solely as a function of the demographic and social organizational characteristics of neighborhoods, or that variation in schooling is inconsequential and insignificant. Yet, as Reiss (1995: 307) notes, "schools are rarely a microcosm of the communities in which they are located." Given that schools are influenced by both local and extralocal factors (such as district-wide, state, and national policies, reforms, and legal mandates), it reasons that schools may indeed have an impact on youth behavior that is independent of neighborhood and family influences. Thus, to comprehend the etiology of youth

behavior, scholars should not ignore schools effects.[1]

As another rationale for multicontextual research, it may be true that school, neighborhood, and family characteristics interact to affect youth development and behavior. For instance, parents are known to base school choice and residential mobility decisions on factors such as school safety and neighborhood crime (e.g., Taub, Taylor, and Dunham, 1984). Thus, family-based social controls may be an inverse function of school and neighborhood controls.

This study provides an examination of the independent and interdependent influences of school, neighborhood, and family contexts through an analysis of juvenile delinquency, specifically student suspension and arrest. Although school, neighborhood, and family characteristics have all been implicated as consequential determinants of delinquency both in and out of school, research on the relative and joint contributions of these contexts to youth outcomes such as suspension and arrest has been limited. Thus, I examine the association among school-, neighborhood-, and family-based controls and student suspension and arrest. Focus is given to these two particular delinquent outcomes to contrast the efficacy of social controls for a school-based outcome (i.e., suspension) relative to an outcome that typically occurs outside the domain of schools (i.e., arrest). In other words, the purpose of examining these two outcomes is to determine whether the necessity of a multicontextual approach to understanding behavioral outcomes depends on *where* the behavior occurs (i.e., within or outside of school). I ask the following questions: First, to what extent are social controls derived from one context tightly coupled with controls derived from other social contexts? For instance, are school social controls redundant to (i.e., highly correlated with) neighborhood controls and family controls? Second, how do school-, neighborhood-, and family-based social controls jointly operate to influence suspension and arrest? By *jointly*, I am interested in both the independent additive effects of each set of controls as well as the interacting effects.

THEORETICAL FRAMEWORK

Although the study of environmental influences on youth behavior has long been of interest across the social sciences, much of the current popularity of the contextual effects approach derives from the influential work

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1. Moreover, under the assumption that school effects are at least minimally correlated with neighborhood conditions, if researchers exclude school characteristics in an analysis, then effects that are attributed to neighborhood conditions may be confounded with an unmeasured characteristic of schools. Thus, the exclusion of school effects may result in an overestimation of neighborhood effects (Cook, 2003; Duncan and Raudenbush, 2001).

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of Urie Bronfenbrenner. Bronfenbrenner (1979, 1989) contends that human development and behavior should be studied through a multicontextual approach, which recognizes that individuals participate in multiple social contexts at the same time as well as enter and exit different contexts throughout their lives.

A vast amount of research has examined the association between sociodemographic characteristics of social contexts and youth behavior, particularly with respect to income, poverty, and racial-ethnic composition. Yet, sociodemographic measures do not provide information for exactly *how* and *why* a given social context (e.g., school, neighborhood, or family context) brings about a change in a given behavior (Cook et al., 2002; Sampson, Morenoff, and Gannon-Rowley, 2002). Rather, a focus on intervening mechanisms and social processes allows investigators to understand which aspects of social context directly influence behavior as well as how sociodemographic characteristics operate to influence behavior indirectly. Following Wikström and Sampson (2006: 2), a mechanism explains "*why* a putative cause brings about an effect" (emphasis in original). More specifically, Sampson (2006: 32) argues that a social mechanism is "a theoretically plausible (albeit typically unobservable) contextual process that accounts for or explains a given phenomenon."

The central focus of this study is on exploring the mechanisms of informal social control. Distinct social processes and social ties characterize schools, neighborhoods, and families, each of which can produce social control. This study seeks to examine how informal social controls that stem from multiple contexts influence youth behavioral outcomes. Figure 1 depicts the conceptual framework that serves as a guide for examining the relation among social controls, suspension, and arrest. Importantly, social control is a general process by which youth behavior and behavioral outcomes are regulated, but multiple pathways (i.e., mechanisms) exist by which social control may be achieved across contexts and even within the same context. For instance, teachers may exert control over student behavior through social bonds, through the direct monitoring of behavior, or through the socialization of youth to norms. Using figure 1 as a conceptual guide, the discussion that follows outlines both where social control is achieved (i.e., school, neighborhood, and family) and why (i.e., social bonds, monitoring of behavior, or collective socialization to norms). Although focus in the remainder of this study is on social control, it is important to recognize that variation in the "structural features" of social contexts, such as concentrated poverty and residential instability, impact the capacity for social control within a given context.

Figure 1. Conceptual Framework of Social Control
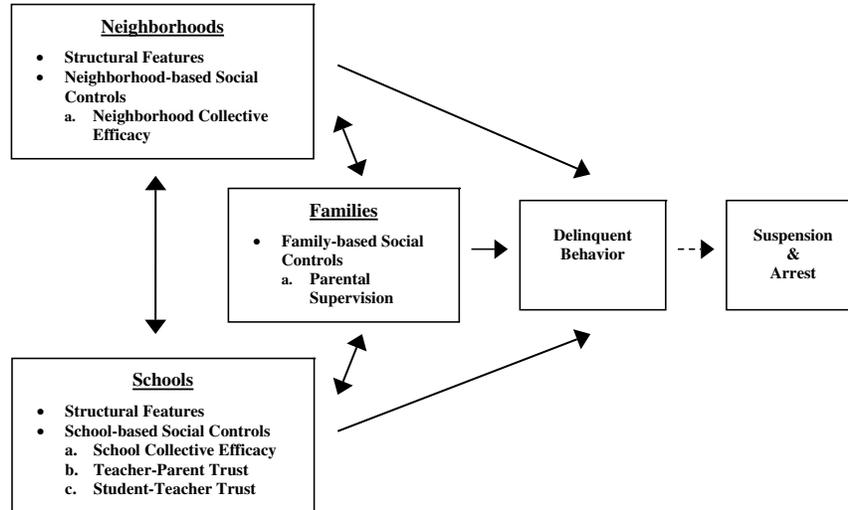
NOTE: the two-way arrows drawn between neighborhoods, schools, and families depict the *moderating*, *interdependent* relations between social controls. The dashed line and arrow between delinquent behavior and suspension and arrest denotes that delinquency is one important antecedent of suspension and arrest outcomes, but these outcomes are also the product of official responses to delinquency on the part of schools and police (see also footnote 7). Analyses presented in this study examine the association between neighborhood-, school-, and family-based controls and student suspension and arrest.

PARENTAL SUPERVISION

Sampson and Laub's (1993; Laub and Sampson, 2003) analysis of Sheldon and Eleanor Glueck's matched data with 500 delinquents and 500 nondelinquents offers a framework for examining the effect of social controls on juvenile delinquency. These authors use a multicontextual approach to explore the processes of social control that are related to both youth and adult outcomes. Sampson and Laub (1993) argue that informal social controls mediate the effect of structural context (e.g., neighborhood poverty) on behavior. Informal controls within the family provide several means (i.e., mechanisms) by which to inhibit problem behavior. First, family controls foster a youth's bond to society (Hirschi, 1969). In the absence of these bonds, the likelihood of delinquency is greater. Second, inadequate socialization within the family leads to low self-control and correspondingly makes a host of antisocial behaviors more likely (Gottfredson and Hirschi, 1990). Third, and more directly, parental supervision provides

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monitoring of child activities and behavior (Baumrind, 1975). It is this third mechanism of familial social control that will be examined empirically in this study.

Hypothesis 1: The likelihood of both suspension from school and arrest are inversely related to the extent to which youths are supervised by their parents.

NEIGHBORHOOD COLLECTIVE EFFICACY

Coleman (1988) observes that when parents know the parents of their child's friends, potential benefits exist for adolescent development and control of behavior. This intergenerational closure that Coleman describes provides parents with information from other parents and neighbors about their children and provides extra supervision and monitoring of children. Coleman notes that intergenerational closure is one type of social structure that facilitates social capital.

Yet, Sampson (2001) argues that the strength of social ties alone cannot explain social control, given that strong ties are not always conducive to action. Evidence of this argument can be observed in Whyte's (1943) ethnographic account in *Street Corner Society*. Cornerville was characterized by dense social ties, but the area still had much criminal activity, including organized crime. One lesson learned from Whyte's study is that dense social ties among neighborhood residents, and the social capital derived from these relations, are certainly resources available to control crime and misbehavior, but they must be used toward a specific purpose, like stopping neighborhood crime.

Coleman (1988) was careful to remark that social capital makes certain actions possible, but that does not guarantee that such actions will necessarily take place (see also Bursik and Grasmick, 1993). Therefore, social capital is a necessary, but not sufficient, requirement for action. If social networks provide a capacity for action, then how is this capacity activated? In response to this question, Sampson, Raudenbush, and Earls (1997) introduce a concept called "collective efficacy," which refers to the process of activating or converting social ties among neighborhood residents to achieve collective goals, such as public order or the control of crime.

It is vital to ask what exactly is the causal mechanism underlying collective efficacy? Is collective efficacy simply a form of group intervention to redress a problem, or does collective efficacy more broadly involve the collective socialization of youths (i.e., toward prosocial behavior)? Is collective efficacy a theory of crime rates, individual human development, or both? Sampson (2006) characterizes these dilemmas as distinguishing between the *situational* and *enduring* effects of collective efficacy. With the

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former, collective efficacy inhibits crime in a given neighborhood regardless of where the would-be criminal resides, whereas in the latter, collective efficacy in an individual's neighborhood of residence influences his or her behavior even when he or she leaves the confines of the neighborhood. Research to date convincingly demonstrates a situational effect of collective efficacy on neighborhood crime *rates* (e.g., Sampson, Raudenbush, and Earls, 1997); yet research has also shown that collective efficacy does not significantly predict *individual levels* of delinquency (see, e.g., Kirk, 2008; Sampson, Morenoff, and Raudenbush, 2005). This observation may result because collective efficacy is situational (as opposed to enduring) and has little staying power once residents are outside the boundaries of the given neighborhood (Sampson, 2006). In this study, I revisit the potential for an *enduring* impact of neighborhood collective efficacy at the individual level—that is, whether collective efficacy among neighbors and neighborhood parents still impacts neighborhood children even when they are in school and other locales.

Hypothesis 2: Neighborhood collective efficacy provides an enduring, controlling influence on youth, which reduces the likelihood of suspension from school and arrest.

SCHOOL COLLECTIVE EFFICACY

Much attention in educational research has been given to understanding how internal school ties influence school effectiveness. Theory and research in this domain are often categorized under the rubric of "communal school organization." Communal school organization refers to the social organization of schools as a form of community with a set of traditions, values, and a shared existence (Bryk and Driscoll, 1988; Bryk, Lee, and Holland, 1993; Gottfredson et al., 2005; Payne, Gottfredson, and Gottfredson, 2003). Community develops and is maintained through social ties among school actors, where ties are characterized by supportive relations, collaboration, and trust. One recent effort in this domain is the work of Bryk and Schneider (2002) in their explication of "relational trust."

Bryk and Schneider (2002: 14) define relational trust as a "consequential organizational property of a school community" that is rooted in the "nature of interpersonal social exchanges" among members of the school community. They argue that the basic operation of schools is conditioned on social exchanges among school actors. The conception of relational trust is strongly related to Coleman's (1988) discussion of social capital. In adherence with Coleman's reasoning, exchanges among school actors carry with them a set of obligations and expectations. When these obligations and expectations are not met, relational trust and social relationships are weakened. However, when obligations and expectations are met, and

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relationships are characterized by trust, consensus on norms and collective control of student behavior are more likely.

Just as Coleman (1988) observes that social capital merely makes possible certain actions, one could ask whether relational trust in particular, and communal school organization more generally, is sufficient for producing social control. Relational trust may be best characterized as a "resource potential," but it must also be activated and used (Sampson, Morenoff, and Earls, 1999). Thus, the conception of collective efficacy may be appropriately applied to school environments to refer to the way relational trust among school actors is converted to achieve some collective goal (e.g., the enforcement of school rules or school improvement). For instance, research shows that collective participation on the part of teachers in planning curriculum and in maintaining school rules leads to positive student outcomes like high attendance and low levels of delinquency (see, e.g., Rutter, 1983; Rutter et al., 1979). Thus, student behavior may be most effectively controlled in the presence of trusting ties among school actors and collective participation among these actors.

This study extends the application of both relational trust and collective efficacy. Just as neighborhood collective efficacy reveals how social capital in the neighborhood community can be activated to promote social control, I argue that collective efficacy within the domain of schools is a mechanism that activates the communal organization within a school to control student behavior. Moreover, like neighborhood collective efficacy, school collective efficacy may have both an enduring and situational influence on youth behavior. The enduring mechanism may take the form of collective socialization of youths, whereas the situational mechanism involves the direct monitoring of behavior and intervention in cases of misbehavior. Both mechanisms may operate to reduce the likelihood of suspension, whereas the enduring socializing influence of school collective efficacy may impact the likelihood of arrest. This rationale yields the following hypothesis:

Hypothesis 3: High levels of school collective efficacy provide an inhibiting effect on delinquency. Juvenile arrest is controlled through the mechanism of collective socialization, whereas suspension is controlled through socialization as well as through direct monitoring of student behavior.

TEACHER–PARENT TRUST

Although social controls within a school serve as a resource for regulating student behavior, scholars are also concerned with the importance of social ties between schools and the local community for achieving social control. In her meticulous examination of social disorganization theory,

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Kornhauser (1978) argues that one of the primary sources of social disorganization is the isolation of community institutions from families. More specifically, she observes that in socially disorganized areas, "there is a paucity of intermediate relations that link primary to secondary institutions. . . . The family in particular has few links to other institutions. The school stands apart from the remainder of the community, alien and unresponsive to its needs" (Kornhauser, 1978: 79). What exactly are these "intermediate relations" that link community institutions such as families and schools?

To develop an answer to the question, recall that both student behavior and academic achievement benefit when parents are aware of what their children are doing in school and when shared norms and expectations are present among parents and teachers about student behavior and performance (Henderson and Berla, 1994; Rumberger et al., 1990; Steinberg et al., 1992). Although much of Coleman's (1988) discussion of social capital and the structure of intergenerational closure that fosters social capital emphasizes the importance of parent-to-parent ties in a school community, he also observes the importance of social network closure among other actors in the school community (Coleman, 1987, 1995). When teachers, administrators, and parents are all tied together in a closed social network, agreement on, and enforcement of, social norms for appropriate behavior is more likely (Bryk, Lee, and Holland, 1993; Coleman, 1987, 1995).

A related framework for understanding the relationship between parental practices and social control is found in the work of Furstenberg et al. (1999) on family management. Furstenberg et al. characterize family management as a process by which parents exercise social capital to protect their children and to promote their prospects for successful youth development. To the extent that families can establish intermediate relations with schools, they may be able to reinforce indirectly the social norms and values imparted within the home by communicating those norms and values through teachers. Thus, this study pays particular attention to the extent of communication between parents and teachers as well as to the quality of ties between these groups. In this case, the specific mechanism of social control is the collective (i.e., among teachers and parents) socialization of youths to normative behavior. I refer to this relational measure as teacher–parent trust.

Hypothesis 4: The likelihood of both suspension from school and arrest are inversely related to the extent to which teacher–parent relations are characterized by trust.

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STUDENT–TEACHER TRUST

A vast amount of literature has investigated the importance of social bonds between students and teachers with respect to student performance and behavior, with much of the literature grounded in attachment theory and social bond theory (Bowlby, 1969; Hirschi, 1969). The importance of relations between youth and adults, in this case teachers, is to bond youth to society and to societal institutions. To the extent that students share a bond with teachers in particular, and with school more generally, they are said to have a greater stake in conformity (Hirschi, 1969).

As an example of this research stream, Crosnoe, Johnson, and Elder (2004) examine how the strength of social bonds between students and teachers influences student achievement and problem behavior. They find that stronger bonds are associated with higher levels of academic achievement and with a lower likelihood of disciplinary problems. Similarly, Payne, Gottfredson, and Gottfedson (2003) find that strong bonds between students and teachers in particular, and school more generally, are negatively related to student delinquency. However, research demonstrates that relationships between students and teachers characterized by conflict correlate negatively with school liking and positively with school avoidance and problem behavior (Birch and Ladd, 1997, 1998; Pianta, Steinberg, and Rollins, 1995). This study explores the role of social bonds between students and teachers, specifically the trust between students and teachers, as a mechanism of the social control of youth behavioral outcomes.

Hypothesis 5: The likelihood of both student suspension from school and arrest is negatively related to the extent of trusting social bonds between the student and the teacher.

THE INTERDEPENDENCE OF SOCIAL CONTEXTS

The aforementioned work of Bronfenbrenner (1979, 1989) serves as a foundation for understanding the interdependences of social contexts and the consequences for youth development. Bronfenbrenner contrasts what he terms microsystems and mesosystems; microsystems are characterized by relations and patterns of activity that developing individuals experience in one particular context (e.g., school, neighborhood, and family), and mesosystems comprise the link among the various social contexts that individuals participate in (e.g., the interdependency among schools, neighborhoods, and families).[2] Most research on contextual effects assesses the

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2. Bronfenbrenner (1979, 1989) also characterizes two other systems in his nested taxonomy. Exosystems are the settings that individuals do not directly participate in but still influence the development of the focal individual (e.g., children are influenced by what happens to their parents at work). Macrosystems consist of

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microsystem influence on individual outcomes. Far less research has examined the mesosystem level. Of the exceptions, a few recent studies have assessed how family and neighborhood environments interact to influence child outcomes (e.g., Burton and Jarrett, 2000; Duncan, Connell, and Klebanov, 1997; Jarrett, 1997), and several other studies advocate the joint consideration of neighborhoods and schools (e.g., Garner and Raudenbush, 1991; Teitler and Weiss, 2000). The interaction between family and school contexts has also received some attention in the empirical literature (Crosnoe, 2004), and a select group of studies has simultaneously examined the influence of schools, neighborhoods, families, and peers on youth development (e.g., Barber and Olsen, 1997; Cook et al., 2002; Elliott et al., 2006; Sameroff, Peck, and Eccles, 2004). Before proceeding to analyses, it is vital to be clear about the *mechanism* that underlies the interdependency among social contexts.

Under the assumption that schools, neighborhoods, and families are in fact consequential (in some capacity) to youth outcomes, several contrasting models are available for understanding the nature of the interdependencies among these three contexts (i.e., the mesosystem). First, one context may serve as a *mediator* of factors from another social context. In this case, one context (e.g., neighborhoods) influences youth outcomes *indirectly* through a mediator (e.g., families). Second, social contexts may serve as *moderators* to produce a joint effect on youth outcomes.[3] In addition to examining the independent effect of various contexts, the main objective of this study is to examine whether school and family characteristics *moderate* the influence of neighborhoods on delinquency.

With moderating effects, social contexts interact to produce a joint effect on youth development and behavior. In this case, the moderating context may either *compensate* for the effects of another context or *accentuate* the effects of another context. As an example of the former, in her ethnographic study of African-American families, Jarrett (1997) finds that parents who reside in poor, dangerous neighborhoods often compensate for these neighborhood conditions by being extra vigorous in their supervisory and child-protection strategies. One common strategy used by mothers in Jarrett's study was to confine children to the home, and another method was to discourage children from hanging out with disruptive neighborhood peers. As another example, in a study of 5th- and 8th-grade students, Barber and Olsen (1997) examine the interactions among

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the overarching ideology, culture, and beliefs that surround the microsystems, mesosystems, and exosystems.

3. A third model is substitution, whereby the effects of one context disappear once accounting for another context (cf. Cook, 2003). In this study, however, I focus on interdependency models that assume that school, neighborhood, and family factors are distinct and are not merely substitutes for each other.

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school, neighborhood, family, and peer contexts. They find some evidence of a moderating influence of contexts on the antisocial behavior of 5th-grade girls. These authors find an inverse, interacting relationship between the socializing effects of one social context (e.g., family) on antisocial behavior relative to the socializing effects of other contexts (e.g., schools and neighborhoods). Finally, in perhaps the most extensive study of moderating effects of neighborhood, school, and family contexts on youth development, Elliott et al. (2006) find that good parenting practices have a positive effect on youth personal competence (i.e., self-esteem and self-efficacy), which becomes even stronger in disadvantaged neighborhoods. They also find that good parenting practices have a stronger controlling influence on youth problem behavior in disadvantaged neighborhoods relative to advantaged neighborhoods. Although informative, the Elliott et al. study does have a few limitations that may influence the validity of the findings; the study sample is drawn from a relatively limited number of neighborhoods across two study sites, and it likely suffers from same-source bias in that measures of neighborhood and school organizational characteristics are taken from the same respondents that are the focus of the analysis (for a discussion, see Duncan and Raudenbush, 1999).

While some evidence suggests a compensatory moderating relation among social contexts, less evidence exists for accentuating effects. As one exception, Browning, Leventhal, and Brooks-Gunn (2005) find a significant interactive effect of neighborhood collective efficacy and parental monitoring on the timing of sexual initiation for youth. Although collective efficacy has little effect on youth who are highly monitored (i.e., supervised) by parents, a lack of collective efficacy and a lack of parental monitoring combine to exert a substantial increase in the odds of sexual initiation. As another example, Beyers et al. (2003) find a significant interactive effect of parental monitoring and residential stability on youth externalizing behaviors (aggression and delinquency). They find that parental monitoring has little effect on externalizing in neighborhoods high in residential stability; yet a combination of residential instability and low parental monitoring coalesce to increase the likelihood of externalizing behaviors substantially.

As depicted through the two-way arrows among schools, neighborhoods, and families in figure 1, this study seeks to determine whether an interdependent, compensatory relation exists among social controls situated in different contexts. For instance, if social control is lacking in the wider neighborhood context, do parents and teachers put added emphasis on providing controls within the family and schools to shield youth from deleterious neighborhood conditions (i.e., a compensatory moderating influence)? I hypothesize that this is the case, which yields the following hypothesis:

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Hypothesis 6: Neighborhood collective efficacy interacts with parental supervision, school collective efficacy, teacher–parent trust, and student–teacher trust, such that the effects of the latter four controls are stronger in the absence of neighborhood collective efficacy.

In sum, this study examines the association among five varieties of social control, as well as between social controls and student suspension and arrest. As depicted in figure 1, these five varieties of social control are situated within schools, neighborhoods, and families, and they include *parental supervision*, *neighborhood collective efficacy*, *school collective efficacy*, *teacher–parent trust*, and *student–teacher trust*. Prior theoretical and empirical work suggests that each variety of control operates independently to influence youth behavior, but studies of multiple contexts—particularly interdependent effects—are relatively rare. This observation is especially true with respect to studies of crime and delinquency. Of those studies that do examine multicontextual influences, many are limited to small samples of schools and neighborhoods. Moreover, of those multicontextual studies that move beyond structural measures of contexts to examine the influences of social processes and social organization (e.g., school climate and neighborhood collective efficacy), many may suffer from same-source bias. The contribution of this study is to examine both the independent and interdependent effects of school, neighborhood, and family contexts, and to do so by using measures of social control and the dependent variables (suspension and arrest) drawn from independent samples.

DATA AND RESEARCH DESIGN

The study sample is drawn from the 1997 Student Survey of the Chicago Public Schools (CPS), conducted by the Consortium on Chicago School Research (CCSR) at the University of Chicago. For this survey, CCSR employed a stratified random sampling design (by geographic area and area income levels) to produce a sample of 80 elementary schools from a population of 477 elementary schools in the Chicago Public School system.[4] In this survey, a sample of approximately 7,500 elementary school students in grades 6 and 8 responded to a variety of questions on topics related to classroom activities and experiences, motivation and expectations for learning, as well as parental involvement and support, among

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4. CCSR (1997) invited all Chicago public schools to complete the survey, yet took extra measures to ensure high response rates within the 80 schools selected as part of the representative sample. Excluded from the sample are special education schools, alternative schools for pregnant girls, and juvenile detention schools. Note, in the Chicago Public School system, elementary school generally includes kindergarten through 8th grade.

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others. Surveys were distributed to the testing directors of respective schools on February 14, 1997, and survey administration took place on February 18th (CCSR, 1997: 14). In addition to the student survey, CCSR conducted a survey of roughly 2,000 elementary school teachers within the same 80 schools (1997 Teacher Survey of the Chicago Public Schools). To ensure that the 80 sampled schools were representative of the entire population of elementary schools in the Chicago Public School system, CCSR undertook a comparison of sampled schools relative to the general population and found that sampled schools are representative of the population of schools, as measured by the percent of low-income students, percentile scores on the Iowa Test of Basic Skills (ITBS), and the racial composition of the student body (CCSR, 1997: 17).

Included in the sample are general curriculum elementary schools as well as magnet schools. All 80 schools completed the student survey, the teacher survey, or both. The average within-school response rate for students was 78 percent, and for teachers the response rate was 63 percent (CCSR, 1997). Of the 80 sampled schools, students from 70 schools participated in the survey, and teachers from 78 schools participated. In 68 schools, both students and teachers participated in the respective surveys. My analytic sample consists of the 68 elementary schools in which both students and teachers participated in the surveys. This sample includes 7,407 6th- and 8th-grade students and 1,792 teachers.

I compared the 68 elementary schools included in the analytic sample with the 12 discarded from the sample on the same three characteristics used in the comparison by CCSR (i.e., the percent of low-income students, ITBS scores, as well as school racial and ethnic composition). The analytic sample of schools showed no significant difference with respect to student income, average ITBS scores, and racial-ethnic composition compared with the 12 discarded schools [for student income: $F = 3.557$; for ITBS scores: $F = 1.249$; for the percent of black students: $F = 1.336$; for the percent of Latino students: $F = .174$; degrees of freedom (d.f.) = 1, 79].[5]

Data on neighborhood-level social control processes come from the 1995 Project on Human Development in Chicago Neighborhoods (PHDCN) Community Survey, and neighborhood measures of concentrated poverty, residential stability, and the percent of foreign-born

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5.   Yet, to the extent that the analytic sample of schools is statistically different from the discarded schools and the general population of schools on relevant measures, it may be the case that the analytic sample is not representative of certain characteristics of Chicago schools. Likewise, if the students and teachers who responded to the surveys are different than their counterparts who did not respond, results may not fully generalize to all students and teachers.

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residents derived from the 1990 U.S. Census.[6] The Community Survey
yielded a probability sample of 8,782 Chicago residents, who responded to
a series of questions about the characteristics of their neighborhood envi-
ronments. The geographic unit of analysis used in statistical models is the
neighborhood cluster defined in the PHDCN data. For the purposes of the
PHDCN, neighborhood boundaries were operationally defined by com-
bining 847 census tracts into 343 neighborhood clusters, which were con-
structed to be "as ecologically meaningful as possible, composed of
geographically contiguous census tracts, and internally homogeneous on
key census indicators" (Sampson, Raudenbush, and Earls, 1997: 919).
These census indicators include socioeconomic status, race/ethnicity, hous-
ing density, and family structure. An average of 8,000 residents comprises
each of the 343 neighborhood clusters. In terms of sampling, a multistage
procedure was used during data collection to assemble the total sample of
8,782 residents. In the first stage, Chicago city blocks were sampled within
each of the 343 neighborhood clusters (Earls, 1999). In the second stage,
dwellings were sampled within each of the sampled city blocks. Finally,
one adult resident aged 18 years or older was sampled within the dwelling
unit. The final response rate was 75 percent (Sampson, Raudenbush, and
Earls, 1997).

The 68 schools in the analytic sample are nested within 67 of the neigh-
borhood clusters. Thus, some Chicago neighborhoods are not represented
in the study. Recall, however, that the CCSR sampling procedure was
explicitly designed to sample schools from a representative mixture of
neighborhoods. To examine the validity of this procedure, I assess whether
comparable proportions of sampled (67) and nonsampled (276) neighbor-
hoods fall within four different categories along the poverty distribution: 0
to 10 percent, 10 to 20 percent, 20 to 40 percent, and 40 percent or more.
The sample of 67 neighborhoods showed no significant difference with
respect to poverty compared with the nonsampled neighborhoods (chi-
square = 5.028, p = .170).

DEPENDENT VARIABLES

Two dependent variables are used in the study: *suspension* and *arrest*.
Suspension represents an official decision on the part of school-based
actors, whereas arrest is the decision of the police. Thus, selection of these
two dependent variables allows for a school versus nonschool contrast in

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6. The PHDCN survey and the CCSR Student and Teacher surveys were collected
   independently by different organizations. Although the dates of the survey
   administrations are close, they do not exactly align. Yet I argue that it is of bene-
   fit to have data on neighborhood social control measured prior to the suspension
   and arrest outcome measures derived from the CCSR data.

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the operation of social controls.[7] Suspension is a self-report binary mea-
sure that indicates whether a given student had been suspended from
school at some point during the academic year (CCSR, 1997). Similarly,
arrest is a self-report binary measure that indicates whether a given stu-
dent had been arrested anywhere at some point during the academic year
(CCSR, 1997). Survey questions for suspension and arrest were originally
measured with four ordered response categories to denote the frequency
of occurrence. For this study, both measures were recoded to binary
indicators.

Both 6th- and 8th-grade students were asked questions about suspen-
sion, but the arrest survey question was only administered to 8th-grade
students (in 64 of the 68 schools). Of the 7,407 students in the 68 schools,
6,477 responded to the suspension survey question and 3,043 8th-graders
responded to the arrest question. To account for whether multivariate
results are sensitive to variation across schools in the extent of missing
responses on the dependent variables, statistical models include a school-
level control for the extent of missing responses.[8]

INDEPENDENT VARIABLES

The first key independent variable of interest is a measure of *parental
supervision*. In the CCSR Student Survey (1997: 74), students were asked
whether their parents make sure they get to school and home from school,
and know where they are located when not in school. Items are combined
into an individual-level Rasch scale, and this individual-level measure is

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7. Both suspension and arrest are the product of youth behavior and official deci-
    sion making, by schools and police, respectively. CCSR survey data lack informa-
    tion on student actions leading to suspension and arrest. Thus, this study uses
    suspension and arrest as outcome measures, as opposed to using self-reported
    measures of behavior. In turn, I hypothesize that social controls are probabilisti-
    cally associated with suspension and arrest, but do not solely determine these
    outcomes because they are also the product of official decision making. It is
    instructive to note that research evidence suggests that self-report measures of
    delinquent behavior and self-report measures of "official" outcomes are highly
    correlated (e.g., Hindelang, Hirschi, and Weis, 1981). Thus, arrest and suspension
    are likely to be highly correlated with delinquent behavior and are largely the
    products of delinquent behavior.
8. I estimate statistical models both with and without a control for missing data (i.e.,
    in "Suspension" models, I include a school-level variable to indicate the percent-
    age of survey participants in the school who did not respond to the suspension
    survey question, and I include a similar school-level control for missing arrest
    data in the "Arrest" models). Results with respect to the direction and signifi-
    cance of coefficients are *not* sensitive to the inclusion of missing data controls. To
    follow, I report results including the missing data controls.

INTERDEPENDENT SOCIAL CONTROLS   495

used in analyses.[9] Higher scores equate to greater levels of parental supervision.

The next measure of social control is an individual-level scale of *student–teacher trust*. This measure derives from the CCSR Student Survey (1997: 80) and describes the quality of ties between students and teachers. Students were asked the extent to which they trust their teachers, the fairness of their teachers, and whether their teachers care about them and listen to them. Higher scores refer to greater levels of trust and communication between students and teachers.

To examine the effect of social ties among teachers on suspension and arrest, this study uses a measure of *school collective efficacy* derived from responses to the CCSR Teacher Survey (1997: 29, 53). School collective efficacy combines indicators of 1) cohesion and trust among teachers and 2) shared expectations among teachers for social control.[10] These two components of school collective efficacy are highly correlated (.875), which suggests that both subscales are measuring the same latent construct of school collective efficacy. Analogous to the arguments put forth by Sampson, Raudenbush, and Earls (1997: 920), I argue that a collective willingness to improve the school and maintain school discipline is enhanced when the school is characterized by cohesion and trust among teachers. Higher scores refer to greater levels of trust and respect among teachers as well as a shared expectation for action. Scores are aggregated to the school level to provide a summary measure of school collective efficacy.

To examine the importance of ties between families and schools with respect to suspension and arrest, this study employs a measure of *teacher–parent trust* derived from responses to the CCSR Teacher Survey (1997: 49). This measure describes the extent to which teachers feel that they have mutual respect and trust with parents and that parents support

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9. See appendix A for a detailed list of the individual items and corresponding response categories for all scales used in this study.

10. Whether this measure of school collective efficacy is analogous to the neighborhood collective efficacy construct described by Sampson, Raudenbush, and Earls (1997) is important to consider. Just as neighborhood collective efficacy represents a combined measure of cohesion and trust with shared expectations for action among neighborhood residents (Sampson, 2006; Sampson, Raudenbush, and Earls, 1997), I suggest that a combined measure of cohesion and trust among teachers with their shared expectations for action may be appropriately defined as collective efficacy, in this case, school collective efficacy. Note that Sampson (2006: 40) argues that social control is fundamentally unobservable, so to operationalize the social control aspects of collective efficacy, it is necessary to have a scale that "taps shared expectations for social action." Following Sampson's argument, I use survey items related to shared expectations among teachers to operationalize the unobservable concept of social control.

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their efforts in educating their children. Higher scores refer to greater levels of trust and respect between teachers and parents. Scores are aggregated to the school-level to provide a summary measure of teacher–parent trust.

A measure of *neighborhood collective efficacy* serves as a mechanism for testing the importance of neighborly social control. This measure derives from the PHDCN Community Survey and is identical to the scale developed by Sampson, Raudenbush, and Earls (1997). Collective efficacy represents a combined measure of shared expectations for social control, social cohesion, and trust among neighborhood residents. Higher scores refer to greater levels of cohesion and trust among residents in the neighborhood surrounding a given school, as well as to their collective willingness to intervene to socially control youth behavior.

In addition to the various measures of social control, included in the statistical models are several predictors to describe the structural and compositional features of schools and neighborhoods. Per the social disorganization tradition (Shaw and McKay, 1942), these features help to explain variation across schools and neighborhoods in the capacity for social control. School structural predictors include *the percent of students who come from low-income families*, *the percent of black students*, *the percent of Latino students*, and *school type* (i.e., *general* or *magnet*). The percent of students in a given school who are low income is computed as the percent of students who are signed up for free or reduced-price lunch. The following indicators of neighborhood structure are used, all of which derive from 1990 census data: *concentrated poverty*, *residential stability*, and the *percent of foreign-born residents*. The first two of these three measures were created via factor analyses, with items in each factor weighted by factor loadings. Concentrated poverty refers to a scale of economic disadvantage. I used the following census indicators to construct the measure: the percentage of families below the poverty line, the percentage of families receiving public assistance, the percentage of unemployed individuals in the civilian labor force, and the percentage of female-headed families with children. Residential stability derives from the following census indicators: the percentage of residents 5 years old and older who lived in the same house 5 years earlier and the percentage of homes that are owner occupied.

Finally, given the multitude of prior research that reveals demographic differences in delinquency (see, e.g., Hindelang, Hirschi, and Weis, 1981), included in statistical models are individual-level controls for *student race*, *ethnicity*, and *gender*.[11] I employ three dummy indicators of race and

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11.   An indicator of age was not available in the data repository. Yet, I have reason to believe that the age range of elementary school students is circumscribed, with an upper range of 15 years. In 1996, the CPS system launched an initiative designed

ethnicity: black, Latino, and "other". The "other" category is primarily composed of white and Asian students, which combine to comprise roughly 15 percent of the student sample. In analyses to follow, the "other" dummy variable is used as the reference category. For the binary indicator of gender, female is the reference category.

ANALYTIC STRATEGY

To address the first research question concerning the extent of coupling among social contexts, analyses begin with a descriptive summary of the bivariate associations among the five measures of social control. Such an analysis provides an answer as to the extent to which the characteristics of schools are associated with the characteristics of students' families and neighborhood quality, respectively.

Second, using the conceptual framework depicted in figure 1 as a guide, I perform a series of multilevel regression analyses for each of the dependent measures, which is designed to assess the independent as well as the multiplicative effect of the five measures of social control on suspension and arrest. In these analyses, students are nested within schools. Given that just one school is sampled within each sampled neighborhood (except for one instance where two schools were sampled), both schools and neighborhoods are treated as level-two units in statistical models. In this case, the neighborhood unit of analysis is the "local neighborhood," that which surrounds a student's school (Welsh, Greene, and Jenkins, 1999). In contrast, an "imported neighborhood" refers to the area where the student resides, which may differ from the local neighborhood. In other words, the neighborhood unit of analysis used in the current study refers to the location of the school, not necessarily to the residential location of the student. That said, roughly 70 percent of elementary school students in the CPS system attend their neighborhood school, so for most students their local

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effectively to end "social promotion," which refers to the practice of promoting students on the basis of age and social development even if they fail to meet minimum achievement standards for their grade (Roderick et al., 1999). A key component of this initiative is a requirement that students achieve a minimum score on standardized tests of reading and math to be promoted to the next grade level. If students fail to meet the minimum standards on two occasions, then they are retained in their grade. However, if a respective student is age 15 years or older, then they are instead sent to an alternative school called a Transition Center (also referred to as an Academic Prep Center). My sample of schools does not include these alternative Transition Centers. Thus, I assume my sample of 6th- and 8th-grade students does not include any students over the age of 15 years.

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and imported neighborhood would be the same (Bryk and Schneider, 2002).[12]

Given that both suspension and arrest are measured with binary variables, I use a two-level logit model in each analysis. With each, I start with a baseline model that includes only the race, ethnicity, and gender of each student. Model building then proceeds by separately adding each measure of social control to the model and then by combining the different measures of control into one model. Such analyses allow for an examination of the independent and additive effects of social controls. A final model assesses the multiplicative effects of social controls by adding interaction terms between neighborhood collective efficacy and the school- and family-based social controls.

RESULTS

Sixteen percent of sampled students self-reported being suspended, whereas 11 percent of respondents reported being arrested. The proportion of students suspended or arrested out of a school's student body varies significantly across schools and neighborhoods (suspension: chi-square = 424.78, d.f. = 67, $p < .001$; arrest: chi-square = 120.98, d.f. = 63, $p < .001$). Whether the between-context differences in the likelihood of suspension or arrest are associated with school or neighborhood structural features or social controls is an empirical question that will be addressed with inferential models.

Table 1 displays a descriptive summary of the sociodemographic as well as social control measures included in analyses. This table reveals that the racial and ethnic composition of schools is highly associated with neighborhood sociodemographic characteristics. Schools with a predominately black student body tend to be located in neighborhoods characterized by

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12. The choice of neighborhood unit—local versus imported—may bear on the nature of the interaction between neighborhood social controls and family controls. Recall hypothesis 6 that neighborhood collective efficacy negatively interacts with family-based social control, such that parents may compensate for a lack of neighborhood collective efficacy by being extra vigorous in their supervision to protect youth from dangerous neighborhood conditions. Such a compensatory effect may occur regardless of which neighborhood is under investigation (local or imported). For instance, if the local neighborhood lacks collective efficacy, a parent may insist that her/his child heads straight home immediately after school, or the parent may pick up the child directly from school so that the respective child spends little time in the local neighborhood. If the imported neighborhood lacks collective efficacy, a parent may choose to confine her/his child indoors. Although hypothesis 6 tests the relation between parental supervision and collective efficacy in the local neighborhood (i.e., surrounding the school), the broader implication is that parents may elevate their supervisory efforts wherever other social controls are lacking.

high levels of concentrated poverty and low percentages of foreign-born residents. However, the size of the Latino population in school is negatively associated with concentrated poverty.

In terms of the association among the five measures of social control, results reported in table 1 indicate that parental supervision, which is measured at the student level, is modestly related to student–teacher trust, but it is either minimally related or unrelated to the other measures of control. Student–teacher trust is significantly and positively related to school collective efficacy, but it is unrelated to both teacher–parent trust and neighborhood collective efficacy. School collective efficacy is also significantly associated with teacher–parent trust but not neighborhood collective efficacy. There are two implications of this finding. First, the sizable correlation between school collective efficacy and teacher–parent trust may result in multicollinearity in inferential models. Second, the minimal zero-order correlation between school collective efficacy and neighborhood collective efficacy is suggestive of a loose coupling between social controls within schools and social controls within neighborhoods. In other words, the extent of control within a neighborhood is not a very good predictor of control within schools. This finding adheres to arguments presented in the neoinstitutional organizational literature, in that the social organization of schools is a function of not only the local neighborhood context but also the larger institutional environment (DiMaggio and Powell, 1983, 1991). Furthermore, a demonstration of the association between school collective efficacy and neighborhood collective efficacy can be examined in figure 2, where the points on the scatterplot represent schools. This figure demonstrates that there is a weak, positive correlation between these two measures. The cluster of schools in the lower right of the figure reveal that even those neighborhoods with the highest levels of collective efficacy in the city of Chicago contain schools with some of the lowest levels of school collective efficacy. In contrast, those schools far above the smoothed line represent schools high in collective efficacy located in neighborhoods with relatively lower levels of neighborhood collective efficacy.

To continue, table 1 also reveals that teacher–parent trust is significantly, although somewhat modestly, associated with neighborhood-level collective efficacy. In sum, outside the bivariate association between school collective efficacy and teacher–parent trust, results reveal a loose coupling among the various measures of social control. Given these findings, it may be the case that the various measures of control are not redundant, and instead, these measures accumulate as a means of reducing the likelihood of suspension and arrest.

Table 1. Descriptive Statistics and Zero-Order Correlations Between Independent Variables

	Mean	(SD)	1	2	3	4	5	6	7	8	9	10	11
Student-Level (N = 7,407)													
1. Parental supervision	6.88	(2.39)	—										
2. Student–teacher trust	4.90	(1.94)	.20***	—									
School-Level (N = 68)													
3. % Black students	56.78	(43.05)	.10***	-.06***	—								
4. % Latino students	29.98	(34.60)	-.07***	.05***	-.87***	—							
5. % Low-income students	85.67	(16.14)	.05***	.01	.20	.15	—						
6. School collective efficacy	-.03	(1.07)	-.01	.07***	-.14	.08	-.23	—					
7. Teacher–parent trust	5.21	(.71)	-.03*	.01	-.20	.06	-.54***	.52***	—				
Neighborhood-Level (N = 67)													
8. Concentrated poverty	.21	(1.14)	.09***	-.03*	.66***	-.47***	.51***	-.27*	-.49***	—			
9. % Foreign-born residents	13.09	(14.29)	-.08***	.05***	-.77***	.77***	-.04	.13	.12	-.51***	—		
10. Residential stability	.13	(1.03)	.02	-.02	.15	-.24	-.20	.18	.29*	-.28*	-.33**	—	
11. Neighborhood collective efficacy	3.90	(.29)	-.06***	.01	-.39***	.13	-.57***	.22	.38***	-.71***	.12	.36**	—

NOTES: Binary student and school measures, including the two dependent variables, are not included in the correlation table. For student race and ethnicity, black students comprise 50 percent of the sample, Latino 35 percent, white 12 percent, and Asian 3 percent. Male students comprise 49 percent of the sample. For school type, general curriculum schools comprise 94 percent of the sample and Magnet schools comprise 6 percent.
*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

Figure 2. Association Between School Collective Efficacy and Neighborhood Collective Efficacy, CPS 1997
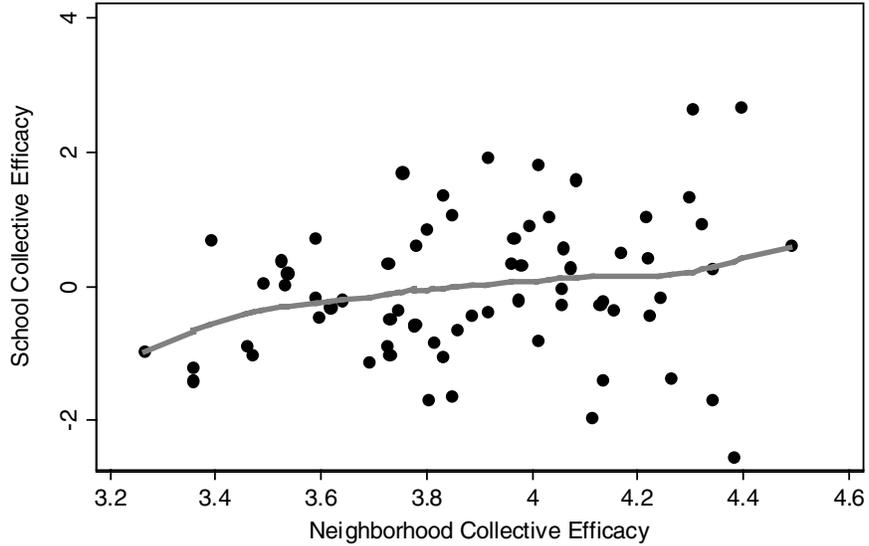
SUSPENSION

Table 2 displays the results for the examination of suspension. Model 1 includes demographic characteristics of students, as well as the school-level control for the proportion of missing cases within a given school on the suspension indicator. Results reveal that male students are significantly more likely to be suspended than female and that black students are more likely to be suspended than other non-Latino students.

Model 2 includes an individual-level measure of parental supervision as the first measure of social control included in the analysis. Results reveal that suspension and parental supervision have a highly significant negative association. Higher levels of supervision are associated with a declining likelihood of suspension. I also examined whether the association between suspension and supervision varies across schools and neighborhoods, and find little statistical support for this assertion (chi-square = 68.91, p = .413). Therefore, the association between suspension and parental supervision is estimated as nonrandomly varying across schools and neighborhoods.

Model 3 includes student–teacher trust as the second measure of social control, and it excludes the measure of parental supervision included in

Table 2. The Association Between Social Control and Student Suspension, CPS 6th- and 8th-Grade Students, 1997

	Model 1 Coefficient	Model 2 Coefficient	Model 3 Coefficient	Model 4 Coefficient	Model 5 Coefficient	Model 6 Coefficient	Model 7 Coefficient	Model 8 Coefficient
Intercept	-1.889***	-1.851***	-1.923***	-1.863***	-1.863***	-1.862***	-1.901***	-1.910***
% Missing data (school)	.004	.003	.002	-.002	.001	.007	-.003	-.003
Individual-Level (N = 6,477)								
Male	.993***	.952***	.963***	.996***	.995***	.997***	.954***	.959***
Black	1.197***	1.195***	1.212***	.845***	.851***	.888***	.877***	.878***
Latino	.216	.208	.241	.161	.159	.207	.178	.180
Parental supervision		-.059***					-.041**	-.042**
Student–teacher trust			-.167***				-.155***	-.162***
School-Level (N = 68)								
% Black students				.007	.007		.008	.008
% Latino students				.002	.002		.002	.003
% Low-income students				.005	.006		.008	.008
Magnet school				-.387	-.369		-.425	-.457
School collective efficacy				-.170**			-.156*	-1.238*
Teacher–parent trust					-.079			
Neighborhood-Level (N = 67)								
Concentrated poverty						.195		
% Foreign-born residents						-.011		
Residential stability						.063	.018	.020
Neighborhood collective efficacy						-.085	.123	.176
Neighborhood collective efficacy × parental supervision								-.029
Neighborhood collective efficacy × student–teacher trust								-.126
Neighborhood collective efficacy × school collective efficacy								.271*

NOTE: Significance tests are calculated from robust standard errors.

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

the previous model. Results indicate that more trusting bonds between students and teachers are associated with a lower likelihood of suspension. A hypothesis test of the association between suspension and student–teacher trust reveals that this association does in fact vary across schools and neighborhoods (chi-square = 109.70, $p < .001$). Therefore, the association between suspension and parental supervision is estimated as randomly varying across schools and neighborhoods.

In model 4, it can be observed that student suspension varies inversely with the level of collective efficacy within a given school, net of school sociodemographic characteristics and school type. In other words, students are less likely to be suspended in schools characterized by high levels of trust and respect among teachers and shared expectations for maintaining school rules. Model 5 reveals that student suspension is unrelated to the degree of trusting relations among teachers and parents.

Model 6 displays the association between suspension and neighborhood collective efficacy, as well as neighborhood sociodemographic correlates. With respect to the latter, suspension is unrelated to concentrated poverty, the percent of foreign-born residents, and residential stability. Moreover, findings provide no support for hypothesis 2 that neighborhood collective efficacy and suspension are inversely related. Such a finding is perhaps unsurprising given that the particular measure of delinquency employed in this analysis regards behavior *within* school and not in the surrounding neighborhood. Theoretically, the implication is that the effect of neighborhood collective efficacy on juvenile delinquency does not appear to be enduring. In other words, whatever controlling capacity neighborhood collective efficacy has on delinquency does not extend indoors within the domain of schools.

Results thus far suggest that three of the five measures of social control are significantly and negatively predictive of student suspension. In model 7, I seek to determine whether the influence of each particular variety of control continues to hold when the other types of social control are included in the same model. Given the lack of a significant association between suspension and teacher–parent trust as well as the strong association between school collective efficacy and teacher–parent trust depicted in table 1, the latter measure is omitted from model 7. Additionally, because of the strong correlations between school sociodemographic characteristics with neighborhood concentrated poverty and the percent of foreign-born residents, it is difficult to discriminate the independent influence of each set of contextual predictors. Thus, I exclude the latter neighborhood sociodemographic measures from the model.

Compared with previous models, it is shown in model 7 that the effects of the various social control measures are slightly mediated when including the other measures of control in the model. Yet, results reveal that

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parental supervision, student–teacher trust, and school collective efficacy are still highly predictive of suspension. Such a finding provides support for hypotheses 1, 3, and 5 but not for hypothesis 2. One implication of these *additive* effects is that efficacious social ties within schools or trusting relations in school between students and teachers can minimize the likelihood of suspension even in the absence of parental supervision.

Results to this point reveal significant independent effects of a variety of social controls on student suspension, but it is also important to investigate the interdependencies among the various controls. For instance, it may be the case that a lack of school-based social controls may accentuate the problems derived from a deficiency of neighborhood collective efficacy. However, an absence of neighborhood collective efficacy may trigger a concerted effort by families to supervise their children or by schools to create a safe haven for students. Therefore, model 8 includes a series of interaction terms among neighborhood collective efficacy and the three other measures of social control to examine the multiplicative associations between social controls and suspension. Although no evidence suggests a cross-level interaction between neighborhood collective efficacy and parental supervision or student–teacher trust, a significant interaction exists between neighborhood and school collective efficacy. This finding indicates a significant *compensatory* relation between the extent of collective efficacy in a school and in the surrounding neighborhood, such that school collective efficacy has a controlling influence on the likelihood of suspension, which becomes even stronger in the absence of neighborhood collective efficacy. As depicted in figure 3, in neighborhoods with high levels of collective efficacy, little difference is observed in the likelihood of suspension in schools with high levels of school collective efficacy versus those with low levels (defined as +2 standard deviations and –2 standard deviations from the mean, respectively). However, in neighborhoods with low levels of collective efficacy, students in schools with low levels of school collective efficacy are drastically more likely to be suspended than students in schools with high levels of school collective efficacy (21 percent versus 6 percent). This finding of a significant compensatory influence of school collective efficacy provides partial support for hypothesis 6.

ARREST

Focus now turns to arrest in table 3. As a reminder, an examination of arrest provides a contrast to suspension in that the act of arrest likely occurs outside of the confines of school, whereas suspension is a school-based delinquent outcome. In model 1, results show that male students are far more likely to be arrested than female, and that black youths are more likely to be arrested than other non-Latino students.

Figure 3. The Moderating Influence of School Collective Efficacy
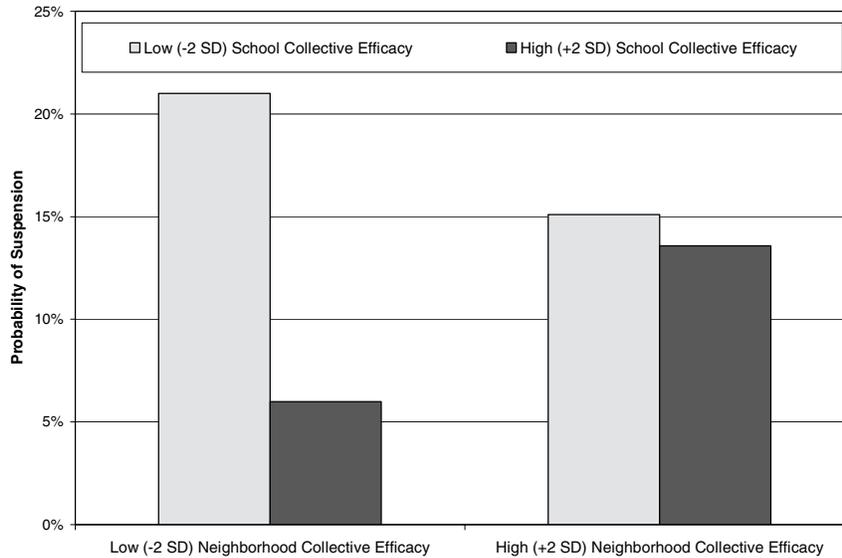
Results in model 2 reveal that arrest and parental supervision are significantly and negatively related, which provides support for hypothesis 1. Higher levels of supervision are associated with a declining likelihood of arrest. A hypothesis test of the association between arrest and parental supervision reveals that this association does not vary across schools and neighborhoods (chi-square = 66.57, p = .355). In model 3, it can be observed that more trusting bonds between students and teachers are associated with a lower likelihood of arrest. A hypothesis test of the association between arrest and student–teacher trust reveals that this association does not vary across schools and neighborhoods (chi-square = 71.50, p = .216). Therefore, the associations between arrest and parental supervision and student–teacher trust are specified as nonrandomly varying across schools and neighborhoods.

In models 4 through 6, I iteratively add the three remaining measures of social control to the model. Results reveal that the extent of collective efficacy in both schools and neighborhoods is related to the likelihood of a student getting arrested. However, teacher–parent trust and arrest are not significantly associated.

Results in model 7 reveal that when the four measures of control are included together in the model (excluding teacher–parent trust), parental supervision and student–teacher trust are still highly predictive of arrest,

Table 3. The Association Between Social Control and Arrest, CPS 8th-Grade Students, 1997

	Model 1 Coefficient	Model 2 Coefficient	Model 3 Coefficient	Model 4 Coefficient	Model 5 Coefficient	Model 6 Coefficient	Model 7 Coefficient	Model 8 Coefficient
Intercept	-2.291***	-2.344***	-2.356***	-2.356***	-2.352***	-2.303***	-2.479***	-2.504***
% Missing Data (School)	.017	.018	.019	.015	.016	.014	.017	.017
Individual-Level (N = 3,043)								
Male	1.298***	1.221***	1.237***	1.302***	1.298***	1.305***	1.187***	1.191***
Black	.416*	.508**	.390*	.436	.419	.285	.417	.389
Latino	-.068	-.077	-.053	-.182	-.188	-.102	-.205	-.225
Parental supervision		-.173***					-.147***	-.150***
Student–teacher trust			-.263***				-.234***	-.253***
School-Level (N = 68)								
% Black students				-.010	-.008		-.012*	-.010
% Latino students				-.008	-.006		-.010	-.008
% Low-income students				.027**	.024**		.033***	.032***
Magnet school				-.227	-.253		-.283	-.376
School collective efficacy				-.161*			-.146	-.951
Teacher–parent trust					-.127			
Neighborhood-Level (N = 67)								
Concentrated poverty						-.234		
% Foreign-born residents						-.013		
Residential stability						-.007	.168	.165
Neighborhood collective efficacy						-1.041*	-.114	-.223
Neighborhood collective efficacy × parental supervision								-.095
Neighborhood collective efficacy × student–teacher trust								-.287*
Neighborhood collective efficacy × school collective efficacy								.201

NOTE: Significance tests are calculated from robust standard errors.
*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

whereas school collective efficacy is marginally related (p = .088). Thus, I find support for hypotheses 1, 3, and 5. Model 8 includes the same interaction terms as in the modeling of student suspension. Results indicate that the association between student–teacher trust and arrest is stronger in neighborhoods with high levels of collective efficacy. Thus, in contrast to hypothesis 6, there is an *accentuating* effect of student–teacher trust rather than a compensatory effect. A lack of neighborhood collective efficacy and a lack of student teacher–trust combine to exert a substantial increase in the likelihood of arrest.

DISCUSSION

The primary objective of this study is to examine simultaneously the impact of five dimensions of social control on student suspension and juvenile arrest. With respect to the first research question concerning the coupling and correlation among the five measures of social control, the results presented in table 1 reveal modest bivariate associations among the various measures. The lone exception is the association between school collective efficacy and teacher–parent trust, with a correlation of .52. These findings suggest that social controls within schools are loosely coupled with social controls in neighborhoods and families. Thus, it is not the case that neighborhoods characterized by concentrated poverty and a deficit of collective efficacy necessarily contain dangerous schools and unstable families. Such a finding confirms what has previously been observed in a variety of ethnographic accounts. For instance, Anderson (1999) shows that the positive influences of "decent" families routinely counteract the structural and social deficiencies of disadvantaged neighborhoods. Empirically, the modest relation among the measures of social control opened up the possibility that controls may operate jointly to reduce the likelihood of suspension and arrest (as opposed to being substitutes).

With respect to the second research question concerning the joint effect of social controls, findings reveal that school-based and family-based informal social controls (i.e., parental supervision, student–teacher trust, and school collective efficacy) additively combine to reduce the likelihood of suspension and arrest. Findings also reveal evidence of interacting effects of neighborhood collective efficacy with school-based controls, although the form of moderating effects differs for suspension and arrest. For suspension, results support the hypothesis that a *compensatory* relation exists between the extent of collective efficacy in schools and in the surrounding neighborhood, such that the controlling influence of school collective efficacy on suspension is relatively greater in neighborhoods that lack collective efficacy. However, for arrest, an *accentuating* relation is observed between neighborhood collective efficacy and student–teacher trust rather

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than a compensatory effect. A lack of neighborhood collective efficacy and a lack of school-based social controls combine to exert a substantial increase in the likelihood of arrest.

The theoretical implications of these findings are threefold. First, a multicontextual approach to understanding the etiology of youth behavior as well as official outcomes such as suspension and arrest is certainly warranted. Without such an approach, not only will scholars lack a complete understanding of delinquency, but also they may overestimate the effects of one social context (e.g., neighborhoods) by ignoring the influence of another (e.g., schools). Second, to explain delinquency fully, it is necessary to consider the interdependencies among social contexts. Again, results presented herein support a hypothesis of the moderating influence of school-based social controls, although the direction of the moderating effect (compensatory or accentuating) is outcome specific. Third, findings reveal that a multicontextual examination of delinquency is imperative regardless of *where* that behavior occurs (i.e., within school for suspension or outside of school for arrest).

Although results provide valuable information about the functioning of the different varieties of social control within and between schools, neighborhoods, and families, limitations of the study provide ample opportunities for future research. First, given the use of cross-sectional contextual data in this study, it is not possible to determine the causal directionality of the associations uncovered through analyses. As an example, results reveal that student–teacher trust is an important predictor of suspension, but getting suspended by school officials may influence whether students trust their teachers. To date, longitudinal contextual research has been limited, but such research designs are essential for sorting out causal associations and the potential for reciprocal causation.

Second, analyses presented in this manuscript are limited to 6th and 8th graders. A multicontextual approach is justified in explaining behavioral outcomes for the age range of 6th and 8th graders, but this may not be true for other age groups. For instance, recognition of family controls may be sufficient for understanding childhood behavior, and it is not until adolescence that the impacts of neighborhood and school controls become salient. More generally, the relative and joint impacts of school, neighborhood, and family contexts may change over the life course. Thus, future analyses that widen the age range of observation might uncover whether the salience of particular contextual effects varies with age.

Third, because of data limitations, I could not assess the impact of every consequential dimension of social control. For instance, one of the most important dimensions of control to investigate is the connection between schools and other neighborhood institutions and organizations. Recall Kornhauser's (1978) argument that one of the primary sources of social

disorganization is the isolation of community institutions. Fortunately, a growing body of research examines links between schools and local organizations (e.g., businesses, universities, and social service agencies). For instance, proponents of school–neighborhood partnerships have emphasized the benefits of these partnerships for overall school effectiveness and student well-being (Epstein, 1995). Yet, given the importance of school–neighborhood ties for social control, future research should give greater attention to the relation between social control and the network structure of social ties between schools and neighborhood organizations.

Fourth, the outcome measures employed in this study—suspension and arrest—are the joint product of youth behavior and official decision making. Data limitations prevented a direct examination of behavior. Given that the multicontextual framework presented in this study is directed toward an understanding of delinquent behavior, this framework needs to be validated with measures of behavior.

A fifth limitation is the threat to internal validity because of the possibility of selection bias. Selection bias may come in many forms, although in a study of contextual effects, the assignment of youth to neighborhoods and schools is of particular importance. Although families are often constrained in decisions of where to live or where youth go to school, they do have at least a minor influence on those decisions. Selection bias may occur when an unobserved or unmeasured characteristic of an individual or family influences, on the one hand, where they live and where youth go to school and, on the other hand, youth outcomes. Thus, omitted variables related to neighborhood or school assignment may account for the relation between contextual characteristics and suspension and arrest. The breadth of the data used in this study does alleviate some concern over selection bias but does not eliminate it altogether.

In addition to these five limitations, it should be noted that the scope of the current study focuses on one particular social process—social control—underlying youth behavior, but certainly other mechanisms are relevant for understanding the etiology of delinquency. For instance, contagion models focus on the influence of peers and generally posit that the likelihood of delinquent behavior increases with exposure to others who engage in similar behavior (Crane, 1991; Jencks and Mayer, 1990). Sutherland's (1947) differential association theory is a prominent version of the contagion model. Sutherland posits that criminal behavior is learned through interaction in intimate social groups. Thus, an alternative multicontextual conceptual framework to the one employed in this study may address how peers situated in various social contexts influence the delinquent behavior of a focal individual.

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The current study focuses on explaining between-context variation in suspension and arrest, but the causal story is not complete without considering why particular individuals in a given context engage in delinquency, whereas others do not. Wikström (2006: 61) argues, "people are moved to action (including acts of crime) by how they *see their action alternatives and make their choices when confronted with the particularities of a setting*" (emphasis in original). Wikström importantly points out that individuals differ in what alternatives they perceive and ultimately in what choices they make. Thus, an emphasis on social control may be regarded as supplying the crucial beginning of the causal story of delinquency by describing how contextual settings structure the action alternatives available to an individual, but the remainder of the causal story is to understand how individuals choose among the various alternatives available to them in a particular situation. Situational action theory provides one such explanation of the link between perceived action alternatives and the course of action ultimately chosen, and it focuses attention on individuals' moral development and moral engagement to explain the link (Wikström, 2004, 2006).

In conclusion, although in recent years a vast increase has occurred in the number of studies that examine the mechanisms by which social context influences youth development and behavior, the empirical testing of multicontextual influences is arguably limited. Thus, this study has sought to determine whether a multicontextual approach to youth development is warranted and necessary, and to discover the precise control mechanisms across a variety of contexts that influence student suspension and arrest. Clearly more research should be undertaken to confirm the joint effects of school, neighborhood, and family contexts on youth outcomes. Yet, findings thus far suggest that a multicontextual approach that recognizes both the independent and interdependent influences of schools, neighborhoods, and families is vital for understanding the etiology of delinquency.

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Review, Professor Kirk uses a natural experiment to examine the implications of residential mobility on the likelihood of recidivism.

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Appendix A. Survey Items Used to Construct Measures

NEIGHBORHOOD COLLECTIVE EFFICACY (PHDCN Survey)

"For each of these statements, please tell me whether you strongly agree, agree, disagree, or strongly disagree"
   1) People around here are willing to help their neighbors
   2) People in this neighborhood can be trusted
   3) People in this neighborhood generally don't get along with each other (reverse-coded)
   4) This is a close-knit neighborhood
   5) People in this neighborhood do not share the same values (reverse-coded)

"*For each of the following, please tell me if it is very likely, likely, unlikely or very unlikely that people in your neighborhood" would do something about it*
   6) If a group of neighborhood children were skipping school and hanging out on a street corner
   7) If some children were spray-painting graffiti on a local building
   8) If a child was showing disrespect to an adult
   9) If there was a fight in front of your house and someone was being beaten or threatened
   10) Suppose that because of budget cuts the fire station closest to your home was going to be closed down by the city

SCHOOL COLLECTIVE EFFICACY (CCSR Teacher Survey)[13]

"How many teachers in this school. . ." (none, some, about half, most, nearly all)
   1) Feel responsible when students in this school fail
   2) Feel responsible to help each other do their best
   3) Help maintain discipline in the entire school, not just their classroom
   4) Take responsibility for improving the school
   5) Feel responsible for helping students develop self control
   6) Set high standards for themselves
   7) Feel responsible that all students learn
   8) Really care about each other

"Please mark the extent to which you disagree or agree with each of the following. . ." *(strongly disagree, disagree, agree, or strongly agree)*
   9) Teachers in this school trust each other

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13.   Items 1–7 measure shared expectations among teachers for social control, whereas items 8–13 measure cohesion and trust among teachers.

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10) It's OK in this school to discuss feelings, worries, and frustrations with other teachers
11) Teachers respect other teachers who take the lead in school improvement efforts
12) Teachers at this school respect those colleagues who are expert at their craft
13) You feel respected by other teachers

PARENTAL SUPERVISION (CCSR STUDENT SURVEY)
"How often does a parent or other adult living with you. . ." (never, once in a while, most of the time, all of the time)
1) Wait for you at home after school
2) Make sure you get to school on time
3) Is somewhere that I can get in touch any time I need to
4) Know where I am after school

STUDENT–TEACHER TRUST (CCSR STUDENT SURVEY)
"How much do you agree with the following statements?" (strongly disagree, disagree, agree, or strongly agree)
1) My teachers always keep their promises
2) My teachers punish kids without even knowing what really happened (reverse-coded)
3) My teachers can't be trusted; they say one thing one time and something different the next time (reverse-coded)
4) My teachers get mad whenever I make a mistake (reverse-coded)
5) My teachers always try to be fair
6) I feel safe and comfortable with my teachers in this school
7) My teachers will always listen to students' ideas
8) My teachers don't care what I think (reverse-coded)
9) My teachers really care about me
10) When my teachers tell me not to do something, I know they have a good reason

TEACHER–PARENT TRUST (CCSR TEACHER SURVEY)
"How many of your students' parents. . ." (none, some, about half, most, nearly all)
1) Do their best to help their children learn
2) Support your teaching efforts

"How many teachers at this school. . ." (none, some, about half, most, nearly all)
3) Feel good about parents' support for their work
4) Really care about this local community

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*"Please mark the extent to which you disagree or agree with each of the
following statements about your school. . ." (strongly disagree, disagree,
agree, or strongly agree)*

   5) Teachers and parents think of each other as partners in educating
      children
   6) It is difficult to overcome the cultural barriers between teachers and
      parents (reverse-coded)
   7) Parents have confidence in the expertise of teachers
   8) There is conflict between parents and teachers at this school
      (reverse-coded)
   9) Staff at this school work hard to build trusting relationships with
      parents
   10) Talking with parents helps me understand my students better

"To what extent. . ." (not at all, a little, some, to a great extent)

   11) Do teachers in this school respect parents and community members
       of the local community
   12) Do teachers in this school respect students' parents
   13) Do you feel respected by the parents of your students