Teaching Practices, Classroom Peer Ecologies, and Bullying Behaviors among Schoolchildren

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We are slowly coming to realize that all education is group work. Education of children and adults, education in families and schools never deals with the individual on the one hand and the subject to be taught on the other. It is common knowledge that the success of a teacher of French depends as much on the social atmosphere he [or she] creates as on his [or her] mastering the French language or the laws of learning. Probably in no country have the schools been as much aware of the importance of group management for education as in the United States. Still, the psychologist who has spent an immense amount of time studying learning curves has left the problems of social management in education almost entirely to the practitioner, who is forced to base his [or her] procedure on the primitive method of trial and error, or upon a peculiar mix of philosophy and instinct.

Kurt Lewin (1943, p. 115)

Kurt Lewin, among the greatest of 20th century scholars of social development, analyzed every educational setting from the perspective of the child as a potential opportunity and challenge, as a motivating or inhibitng social current. In this epigraph, Lewin portrays that current as a social atmosphere critical to student success. How might teachers, he asks, direct the social atmosphere of their classrooms towards learning and away from disruption? The situation Lewin describes still holds true today: educational practitioners who strive to cultivate a positive social atmosphere rely as much on “trial and error” or “philosophy and instinct” as on scientifically evaluated practices. A goal of our current research is to help change this state of affairs by developing new ways of thinking about and practicing “social management in education.”

In this chapter we summarize the origins of the framework that guides our current research, then we review theories and practices that have informed that framework. Our current research focuses primarily on elementary classrooms and so we refer primarily to classrooms and individual teachers throughout, but many aspects of our framework could be applied to middle or junior high schools and to the collective teaching faculty in those settings.

Teaching Practices, Peer Ecologies and Youth Outcomes

We approach the problem of social management in education through a developmental-contextual perspective on peer ecologies. In doing so, we have found it useful to attempt to integrate decades of theorizing about classroom social management (e.g., Farmer, Farmer, Estell, & Hutchins, 2007; Gronlund, 1959) with social network modeling procedures that map dynamic social structures and interpersonal connections among students (Gest, Davidson, Rulison, Moody, & Welsh, 2007; Hanish & Rodkin, 2007). In our own empirical research, we have examined how classroom peer ecologies relate to aggression and bullying, achievement, and school relatedness, and we have begun to explore teacher practices that may shape peer ecologies towards healthy, quality classroom environments. Two questions guide this work:

1. What features of classroom peer ecologies are associated with positive youth outcomes? We focus on two aspects of the peer ecology. Social status dynamics involve the prominence of status hierarchies and the behavioral correlates of acceptance and popularity. Social network dynamics include the overall tight-knottedness of the
classroom and the distinctiveness and behavioral basis of children’s peer group affiliations.

(2) What teaching practices are associated with positive classroom peer ecologies and youth outcomes? We consider broad dimensions of classroom quality that are assessed by existing measures together with specific network-related teaching practices that may have particular relevance to how peer ecologies take shape and stabilize over the school year.

Lewin (1943) understood that teachers had the opportunity and the responsibility to optimize children’s peer ecologies. Early studies of sociometry, or the science of the measurement of social relationships, focused creatively on how to quantify properties of peer social ecologies, relate these properties to educational success and failure, and build up a truly social, action-oriented theory of child social development (Rappaport, 1979). Unfortunately, the theoretical and applied ambitions of this early work did not yield a rigorous literature. Computational limitations precluded large-scale research on quantitative variations in the features of classroom peer ecologies; and logistical and political challenges (e.g., consent and assent procedures) made it difficult for practitioners to integrate sociometry into routine practice. By the 1960s, as attention turned to Sputnik and Piaget and away from child social development, and as the field of social network analysis fell into a “dark age” (Freeman, 2004), theory and measurement on classroom social systems declined.

But the pendulum is shifting. There is renewed emphasis on the variety of children’s interpersonal relationships, with particular attention to group influence and social power, and to the implications of these dynamics for classroom management (Farmer, 2000). There is exciting potential in a new generation of social network methodologies to advance measurement and theory of classroom social settings (e.g., Espelage, Green, & Wasserman, 2007; Hanish, Martin, Fabes, & Barcelo, 2008; Veenstra, Lindenberg, Zijlstra, De Winter, Verhulst, & Ormel, 2007). The time is right for acquiring the concepts and quantitative tools necessary for the developmental, contextual framing of children’s academic and social life in school (Hanish & Rodkin, 2007).

We find it useful to distinguish among four aspects of an educational setting such as the classroom: (1) general aspects of teacher-student interaction, (2) aspects of teaching that focus specifically on the peer social network; (3) structural features and dynamics of the peer ecology; and (4) the youth outcomes of concern to practitioners. The interrelations among these are illustrated in Figure 1. We view the classroom peer ecology, comprised of social status and social network features, as proximal determinants of youth outcomes (Path A). In turn, classroom peer ecologies are shaped partly by general teaching practices (Path B) and partly by network-related teaching practices (Path C). Teacher practices may also affect youth outcomes directly (Path D), above and beyond the effects that may be mediated via the peer ecology (Path B → A).

What characterizes a classroom peer ecology that promotes positive youth outcomes? Our view is that peer ecologies characterized by more egalitarian (vs. highly stratified) status hierarchies; strong group norms in support of academic achievement and prosocial behavior; tightly knit positive social ties; little aggression-based homophily (i.e., social clustering of aggressive students); and diverse, ethnically integrated peer relationships will foster greater academic adjustment, less aggression and peer victimization, and deeper feelings of school relatedness (Path A). We also believe that indicators of classroom teaching quality will predict improved youth outcomes in part due to their positive impact on the peer ecology (Path B → A). Finally, we expect that teachers who demonstrate more intentional management of social status and social networks, who actively address aggression and bullying, and who have more accurate knowledge of the peer ecology in their classroom will have a more positive peer ecology (Path C → A), even after taking account of overall teaching quality. In these cases, we
are interested in whether youth succeed in the core developmental tasks of school adjustment: rule-abiding (as opposed to aggressive-disruptive) conduct, academic achievement, and positive peer relationships (Masten, Coatsworth, Neeman, Gest, Tellegen, & Garmezy, 1995). We are interested in youth behaviors and subjective experiences that may mediate the links between teaching practices and these core tasks.

Features of Peer Ecologies

The peer ecology framework (Rodkin, 2004; Rodkin & Fischer, 2003; Rodkin & Hodges, 2003; Rodkin & Karimpour, 2008; Rodkin & Roisman, in press) builds upon Lewin’s (1943) and Bronfenbrenner’s (1944, 1979, 1996) description of multileveled social ecologies. We take three main lessons from Bronfenbrenner’s work.

The first lesson is that Microsystems are critical. Microsystems are “the ultimate mechanism through which development occurs” (Bronfenbrenner, 1996, p. xv). Peer Microsystems involve children interacting with, influencing, and socializing one another. More distal environmental systems are also part of a child’s total ecological environment, but the effects of these distal systems are typically weaker, mediated by the microsystem (as Lewin assumed in his representations of psychological space), and more difficult to detect than for proximal systems (e.g., Swearer, Peugh, Espelage, Sibecker, Kingsbury, & Bevens, 2006).

In Bronfenbrenner’s (1979) formulation, the importance of distal environmental systems was not primarily in terms of direct, unmediated influence on individual behavior, but rather as settings which, when linked to other settings, show enduring developmental growth across transitions of time and place. The classroom (or school) peer ecology is thus a microsystem, embedded within and connected to more distal ecological systems (e.g., family, community, culture, occupational), but a naturally-existing social unit in and of itself.

The second lesson, as Lewin intimates in the epigraph, is that poorly regulated peer ecologies endanger developmental growth. Bronfenbrenner (1979) was clear that peer Microsystems were prone to problem behavior. In the context of the setting of day care (see also Rodkin & Roisman, in press), Hypothesis 23 of The Ecology of Human Development is that: Children who from an early age are cared for in group settings for most of the day are more likely to engage in egocentric, aggressive, and antisocial behavior both during the preschool years and through later childhood into adolescence. The observed effect is particularly marked for boys. It is mediated through the children’s peer group and is most likely to occur in societies that encourage the expression of individualism, aggression, and independence in children’s groups, especially by boys (p. 203).

Mesosystemic processes document that the developmental sequelae of accumulated peer group process within educational settings often narrows future life opportunities: … [T]he school has become over the past two decades… one of the most potent breeding grounds of alienation in American society… [underlying]… the progressive decline observed in achievement test scores… rising rates of homicide, suicide, drug use, and delinquency for children of school age (p. 231).

Bronfenbrenner (1979, p. 284) even finds that peer group processes hinder resilience in his discussion of macrosystemic forces in Elder’s (1975) Children of the Great Depression: … [I]ncreased exposure to peer group influences, as an indirect effect of growing up in the Depression from early childhood, may have contributed to the impaired educational, vocational, and psychological development exhibited by the adult males.

Thus, guiding children towards a positive social atmosphere is no small feat and may have short- and long-term developmental effects for the child. The nature of this guidance by teachers
and other school professionals is what Lewin (1943) wrote was being left to “trial and error.”

To analyze the role of teachers in peer social ecologies, we take a third lesson from Bronfenbrenner, namely that looking within settings is at least as critical as looking across settings. According to Bronfenbrenner (1979, Chs. 3-5), the critical elements of a setting include the intentional, durable, molar activities that occur within it, its dyadic and social network structure, and the roles and status relations operating within the setting. For example, teachers are not themselves part of the peer ecology (as teachers are not “peers”), but teachers play a critical, unique role in the classroom microsystem, acting as bridging agents to other settings and other adults that impact the child’s development. Our expectation is that teachers impact and can be impacted by the peer ecologies of their classrooms as they attempt to guide students towards learning and successful adjustment.

The peer ecological approach that we adopt complements similar socio-ecological approaches to bullying by Swearer, Espelage, and colleagues (Swearer & Espelage, 2004; Swearer et al., 2006). The main theoretical distinction is possibly that while the Swearer and Espelage model situate bullying “across individual, family, peer, school, and community contexts” (Swearer & Espelage, 2004, p. 1), the peer ecological model outlined here concentrates on the molar activities (e.g., child bullying, teacher emotional support), interpersonal roles, and social structures within the microsystemic setting of the elementary classroom. In particular, we focus on aggression and bullying behaviors along two dimensions of classroom peer ecologies: (a) a vertical dimension of social status, representing power and dominance relations among children; and (b) a horizontal dimension of social networks, representing patterns of positive (e.g., friendships, affiliations) and negative (e.g., antipathies, bully-victim) peer relationships.

To understand these features of the peer ecology, it is important to understand how information about peer ecologies is collected.

All measures of the peer ecology described in this chapter are built upon children’s reports of their relationships with or sentiments towards other specific children in the setting. For example, a child may be asked to identify all of her friends in the classroom (or school); or to identify classmates whom she “likes most” or “likes least”. In addition, there are substantial differences in peer group identification procedures depending upon whether peer groups are constructed out of friendship versus affiliative nominations (i.e., “who is your friend?” as opposed to “who do you hang out together a lot with?”) and whether children provide self-reports of their own relationships, or in addition give multi-informant reports of relationships in which they are not personally involved (Gest, Moody, & Rulison, 2007; Rodkin & Ahn, 2009). Once measurement issues are settled, when all (or nearly all) children in a setting provide responses to sociometric questions, the result is a data set that summarizes a complex social network of peer relationships (or sentiments). The field of social network analysis (Wasserman & Faust, 1994) provides sophisticated means of quantifying different features of these networks for developmental analysis (see Cillessen & Borch, 2008).

**Social Status**

The vertical structure of peer ecologies is social status. Social status includes components of likeability and popularity that are differentially related to children’s academic and behavioral adjustment (Cillessen & Mayeux, 2007). Being widely liked (i.e., named as “liked most”) is related to prosocial behavior, but Rodkin, Farmer, Pearl, and Van Acker (2000) found that some children who are perceived by classmates to be popular fit a “model” profile (cool, athletic, leaders, cooperative, studious, not shy, and nonaggressive) while others fit a “tough” profile (cool, athletic, and antisocial). Being considered a friend by many peers is yet another operationalization of social status. Just as individual children within a classroom can differ in social status, individual classrooms can differ in how social status is organized.
Specifically, classrooms can vary in the salience of status hierarchies and in group norms that are reflected in the behavioral correlates of high social status.

**Status hierarchies and structural embeddedness.** Social status is concentrated among a few youth in highly stratified classrooms but is more equally distributed in egalitarian classrooms. For example, Figure 2 illustrates friendship nominations among a group of children (Gest, Davidson, et al., 2007). In Figure 2a, each youth (red circles) receives either 3 or 4 nominations (arrows directed at the youth), with the limited variability suggesting an egalitarian structure. In contrast, in Figure 2b the number of friendship nominations received ranges from 1 to 5, suggesting a more pronounced status hierarchy. It has long been thought that egalitarian or democratic peer ecologies are superior to those in which social capital is held by just a few (e.g., Sherif, 1956). For example, promoting egalitarian, democratic peer relationships is a focus of jigsaw and cooperative learning interventions (e.g., Aronson, Blankey, Stepheh, Sikes & Snapp, 1978). Conversely, the Olweus (1993) definition of bullying requires a physical or psychological power (i.e., social status) differential between bullies and the children whom they harass.

The construct of structural embeddedness (Granovetter, 1985; Moody & White, 2003), is a promising candidate for examining the impact of classroom status hierarchies on bullying and victimization. Granovetter (1985) frames the problem of embeddedness using undersocialized and oversocialized conceptions of human action in economics. The undersocialized conception is a rational-actor model, with no role for social structure and influence; the oversocialized conception is a socialist-structural model where, due to cultural and economic class norms and constraints, individual actors have few choices to make. There is an inherent analogy to education (see also Akerloff & Kranton, 2002; Coleman, 1961; Frank, Muller, Schiller, Riegel-Crumb, Mueller, Crosnoe, & Pearson, 2008), where the undersocialized conception is akin to the individual student “learning French” in a vacuum devoid of social context and relations, and the oversocialized conception is akin to deficit models where children are given up on, “with little hope of effecting a lasting, significant improvement” due to wholesale problems in their “immediate environments” (Bronfenbrenner, 1979, p. 290). Granovetter (1985, p. 490) introduces embeddedness to emphasize the “role of concrete personal relations and structures (or ‘networks’) of such relations in generating trust and discouraging malfeasance.” Moody and White (2003) quantify embeddedness as one aspect of social solidarity or cohesion, constructing an algorithm to index highly embedded actors who are highly connected in the social network from less embedded actors who operate in near-isolation from the network. In a study described below by Ahn, Garandeau, and Rodkin (in press), we explore the implications of classroom-level embeddedness for group norms pertaining to bullying and peer victimization.

**Group norms.** Just as an individual’s social status can be associated with either prosocial or aggressive behavior (Rodkin et al., 2000), the norms of a peer ecology can be directed towards or away from bullying. In non-school youth settings, aggression is popular in some groups but not in others (Wright, Giammarino & Parad, 1986), and the same appears to be true in school classrooms. Figure 3a illustrates the distribution of within-classroom correlations between teacher-rated aggression and peer nominations as “liked most” for 36 elementary classrooms in a small community in central Pennsylvania studied by Gest. Most classrooms have a negative correlation suggesting a norm against aggression, yet the correlations show wide variation, ranging from strongly negative to moderately positive. Rodkin found a similarly large range of classroom-level norms regarding aggression in classrooms from small cities in Illinois (for details see Ahn et al., in press; Rodkin, Wilson, & Ahn, 2007). This is significant as children in classrooms where aggression is normative tend to become more
aggressive themselves, even in future years (Dmitrieva, Steinberg, & Belsky, 2007; Thomas, Bierman, & Conduct Problems Prevention Research Group, 2006). Moreover, the social dynamics entailed in bully/victim relationships vary depending on whether interpersonal aggression occurs in the context of rejection by-- or support from-- children with high social status (Berger & Rodkin, 2009; Rodkin, Farmer, Pearl, & Van Acker, 2006).

A demonstration of the relationship between classroom social hierarchies and group norms favoring aggression was provided in our recent study of 42 classrooms nested within 9 elementary schools in the Midwest U.S. (Ahn et al., in press). Although embeddedness can be calculated at the actor (or individual child) level, the construct also has meaning at the level of the setting (or classroom): classrooms vary according to whether they contain many or few embeddedness levels. Embeddedness levels ranged from two to eight across the 42 classrooms studied by Ahn et al. (in press). Following Moody and White’s (2003) use of embeddedness to illustrate group hierarchy, Ahn et al. (in press) reasoned that classrooms with greater levels of embeddedness (e.g., eight) would be more hierarchical and less egalitarian than classrooms with fewer embeddedness levels (e.g., two) because great variation exists within highly-embedded classrooms with respect to children’s integration in the classroom social network. Conversely, older experimental studies suggest that social networks with egalitarian structures have better group performance and morale across different age groups (Lewin, Lippitt, & White, 1939; Lippitt, 1939; Shaw, 1954), in other words, a more positive social atmosphere.

Ahn et al. (in press) found that aggressors were more popular (and victims less popular) in hierarchical, highly embedded classrooms than in egalitarian, low-embedded classrooms. In hierarchical classrooms, aggression might be an efficient means for highly-embedded children to maintain their central position, and for peripherally-embedded members to attempt to achieve more central positions. Classrooms with social hierarchies tend to have group norms that support aggressors and reject the victims of harassment.

In sum, social status in peer ecologies is relevant to bully/victim dynamics because status hierarchies are a precondition for the power differentials that define bully/victim relationships (Olweus, 1993; Rodkin & Berger, 2008), and social norms can either inhibit or reinforce bullying behavior when it occurs.

**Social Networks**

Classrooms that are similar in the prominence of status hierarchies and in group norms can nonetheless differ in their social network dynamics. Classroom social networks have multiple types of social ties that can provide each child with a niche and social support (e.g., friendships, liking, “hanging around together”), but also with experiences of mutual dislike or enmity (Card & Hodges, 2007; Kindermann & Gest, 2009). Classroom social network dynamics can be described in terms of the overall tight-knittedness of the classroom and the distinctiveness and behavioral basis of subgroups. When students in a classroom come from diverse ethnic and racial backgrounds, classroom social networks can also be characterized by the degree of integrated social relationships as opposed to splits based on race and ethnicity.

**Tight-knittedness.** Tight-knittedness can be quantified in terms of the density, reciprocity and transitivity of positive and negative social ties. For example, the two groups of seven individuals illustrated in Figure 4 differ strongly in tight-knittedness. The less tight-knit network in Figure 4b has a density of .45 (19 out of 42 possible friendship ties exist) compared to a density of .86 (36 out of 42 possible ties exist) for the more tight-knit network in Figure 4a. The two networks differ in the proportion of reciprocated friendship nominations (i.e., 15 out of 21 = .71 in Figure 4a vs. 4 out of 15 = .27 in Figure 4b). In the more tight-knit Figure 4a, friendship ties are also more transitive (i.e., if AB and BC are friends, then AC are friends). It has long been thought that tight-knit classrooms, with rich ties
between children and many positive social relations, lead to better academic and behavioral outcomes, but rarely has this notion been put to empirical test (Roseth, Johnson, & Johnson, 2008). In the Ahn et al. (in press) study showing that bullies were most popular in highly embedded, hierarchical classrooms, effects were strongest in classrooms that were also dense, possibly because pathways of communication and influence to transmit behavioral norms are numerous and varied in these classroom social networks.

**Subgroup distinctiveness.** Subgroups of peers deserve special mention as a unit of social structure. These informal social groups are typically segregated by gender (Gest, Davidson, et al., 2007) and sometimes ethnicity (Garandeau, Wilson, & Rodkin, 2010; Rodkin et al., 2007), and are the most immediate context of children’s perceptions and behaviors. Subgroups can be identified in virtually all peer settings containing more than a few youth, but there are variations in the extent to which these subgroups or cliques represent distinct, non-overlapping social worlds. For example, Figure 5 illustrates friendship patterns among subgroups of girls within the same classroom whom peers identified as “hanging around together a lot.” In Figure 5a, there was only one instance of a friendship bridging these subgroups, which are easily distinguished. In contrast, it is difficult to discern the two groups in Figure 5b because friendships are virtually as common between as within the two groups. Traditionally, educational researchers have interpreted highly distinct subgroups as representing “fault lines” in the classroom social fabric that should be minimized (Gronlund, 1959), and more general perspectives on social networks indicate that ties between otherwise disconnected groups can be valuable (Granovetter, 1972), but this issue has not been studied extensively outside the context of ethnic segregation.

**Homophily and behavioral bases of subgroups.** Classrooms vary in the degree to which relationships are organized around key behaviors such as achievement or aggression (Cairns, Cairns, Neckermann, Gest & Gariépy, 1988; Farmer, Estell, Bishop, O’Neal, & Cairns, 2003). The predominant behaviors within a subgroup affect the individual outcomes of its members for diverse behaviors including aggression (Cairns et al., 1988; Ellis & Zarbatany, 2007; Espelage, Holt & Henkel, 2003; Rodkin et al., 2006), deviant behavior (Fergusson, Vitaro, Wanner, & Brendgen, 2007), and academic engagement and motivation (Ellis & Zarbatany, 2007; Kindermann, 2007; Ryan, 2001). There is broad consensus that when subgroups coalesce around aggression and bullying behaviors, there can be serious threats to classroom behavior management (Farmer, 2000; Gronlund, 1959) and group dynamics of bullying (Salmavalli, 2001). At the same time, aggressive children engage their peer ecology at higher rates than nonaggressive children, and interact with aggressive and nonaggressive children alike (Farmer, Leung, Pearl, Rodkin, Cadwallader, & Van Acker, 2002; Pepler, Craig, & Roberts, 1998)

**Ethnic integration and diversity.** The integrated elementary school stands as one of our proudest and most hard-won achievements. Yet true integration calls for more than just a diverse collection of children in the same building, but also for social integration. An ideal scenario is when children value peers who have positive cross-ethnic relationships and limited negative cross-ethnic relationships. Children with integrated social relationships may be particularly well adjusted, with high social status and reputations as leaders (Kawabata & Crick, 2008; Lease & Blake, 2005). Moreover, diverse schools may offer psychological benefits to students including increased feelings of safety and social satisfaction, and less bullying and loneliness (Juvonen, Nishina, & Graham, 2006).

**Teacher Influence on the Peer Ecology**

Teachers play a central role in the organization of educational settings and in doing so they constrain the peer ecologies that develop within them. We distinguish between teacher influence on peer ecologies that derives from
general patterns of teacher-student interactions and teachers’ direct efforts to understand and exert influence on peer ecologies. As illustrated in Figure 1, we believe that general teacher-student interactions may be related to a broad range of youth outcomes, partly through their impact on the peer ecology (Path B→A), but perhaps primarily through direct processes (Path D). In contrast, teachers’ explicit attempts to understand and influence the peer ecology, which we call network-related teaching, affect youth outcomes primarily through their impact on the peer ecology (Path C→A).

**General Teacher-Student Interactions**

Recent approaches to assessing general classroom quality are based on the premise that observable teacher-student interactions are the key proximal influence on youth outcomes, in contrast to more distal factors such as teacher characteristics (e.g., experience) or classroom features (e.g., curriculum). For example, the Classroom Assessment Scoring System (CLASS; Pianta, La Paro & Hamre, 2006) assesses three broad dimensions that represent a best-practices synthesis of important qualities of teacher-student interaction. Classroom organization refers to “the organization and management of students’ behavior, time and attention” (Pianta et al., 2006, p. 3): it encompasses monitoring, preventing and redirecting student behavior; establishing clear and efficient routines; and facilitating varied and effective learning activities. Instructional Support entails leading instructional discussions focused on higher-order thinking, providing feedback that extends student learning, and facilitating and encouraging new vocabulary and grammar. Finally, Emotional Support is defined by: a positive emotional connection with students; the absence of anger, hostility or aggression toward students; responsivity to student needs; and regard for student perspectives. Studies of elementary classrooms indicate that patterns of Instructional and Emotional Support predict improved academic outcomes (Hamre & Pianta, 2001; Pianta, Belsky, Vandergrift, Houts & Morrison, 2008). However, studies have not generally tested whether associations with youth outcomes might be mediated by changes in the peer ecology (i.e., Path B→A). General patterns of teacher-student interaction may affect student outcomes—including bullying and peer harassment—partly through the peer ecology. **Translating Research Into Practice with Network-Related Teaching: Implications for Bullying-Prevention and Intervention Programs**

Examining bullying in schools from an ecological framework is directly linked to intervention and practice (Pepler, Craig, & O’Connell, 2001). The notion that teachers can and should set out to shape the peer ecology of their classrooms was at the heart of mid-century sociometric research (Gronlund, 1959). This theme was picked up with experimental rigor with the evaluation of cooperative learning techniques such as the jigsaw classroom (Aronson et al., 1978), which is based on a theory of contact that deals directly with peer ecologies via equal social status between groups and subgroup interconnections due to shared goals (Allport, 1954; Sherif, 1956). Recent efforts to shape the peer ecology have been in the context of systematic, school-wide interventions (e.g., Battistich, Schaps, Watson, & Solomon, 1996). Farmer proposes three categories of network-based teaching strategies that may have particular relevance for the peer ecology (Path C): social status management; social network management; and active management of aggression and bullying (Farmer et al., 2006). We also consider the potential importance of teachers’ knowledge and beliefs about the peer ecology in their classroom.

**Social status management.** Classroom social status patterns can be altered with judicious teacher involvement. Gronlund (1959) proposed that teachers should identify low-status children and make systematic efforts to assign them desirable classroom roles that provide public recognition and afford status. Cohen and Lotan (1995) conducted a field experiment in which teachers gave “status treatments” to students who were performing poorly by stressing their multiple abilities and
publicly praising their performance during times of success: these status treatments led to more equal-status interaction between students as measured by sociometric tabulations of friendship. Farmer (2000) emphasizes the importance of teachers seeking to avoid extreme status hierarchies by providing opportunities and recognition for diverse curricular and extracurricular accomplishments, making special efforts to provide low-status students with opportunities to occupy leadership positions and to interact with higher-status classmates.

**Social network management.** Carefully constructed cooperative learning groups can increase classroom social integration, but other types of groupings may affect social networks in ways that teachers do not necessarily plan or anticipate. For example, patterns of friendship formation and dissolution over a school year are partly attributable to the composition of instructional reading groups; other types of groups arranged by teachers are likely to have similar effects (Hallinan & Smith, 1989). Teachers should recognize that their choices of when and how to organize classroom groups can be a powerful tool for managing disruptive behavior (e.g., diversifying the affiliation patterns of a disruptive clique) and promoting social integration.

**Management of aggression and bullying.** The management of aggression is a component of general behavior management, but this topic warrants special attention since aggression plays a salient role in social status and social network dynamics. Teachers vary widely in whether they acknowledge peer victimization and whether or not they intervene (Frey, Jones, Hirschstein, & Edstrom, this volume; Frey, Hirschstein, Edstrom, & Snell, 2009; Pellegrini, 2002). Children use a wide range of aggressive behaviors (physical, verbal, relational) to jockey for power over one another and to establish and maintain status in prominent cliques. Key issues in managing these dynamics are monitoring students during informal periods of the day, responding to the variety of aggressive strategies that youth use, implementing clear and consistent social consequences when incidents arise (Farmer, 2000; Farmer et al., 2006), changing normative student beliefs that support bullying, and addressing children’s social-emotional skills (Frey et al., 2009; Zins, Elias, & Maher, 2007). For example, in a field experimental evaluation of the Steps to Respect program to reduce school bullying in third to fifth grade classrooms, Frey et al. (2009) reported that successful teacher management strategies, such as removing social support for being a bystander to peer victimization, reduced bullying on the playground over a two-year period.

**Beliefs and norms regarding aggression and bullying.** Teachers vary widely in their understanding of the peer ecology of their classrooms. Gest (2006) examined agreement between teachers and their 1st, 3rd, and 5th grade students on reports of friendship and peer group affiliations. Some teachers had only chance levels of agreement whereas others were closely in tune with peer reports. Pearl, Leung, Van Acker, Farmer, and Rodkin (2007) found that while teachers reliably identified the most popular and salient classroom groups, less popular groups were systematically overlooked.

Educators’ relative lack of understanding of classroom peer ecologies can exacerbate peer aggression and bullying (Olweus, 1993; Mulvey & Cauffman, 2001). Teachers often seem unaware of aggression among their students, or are overwhelmed by its prevalence. Teachers who try to stamp out bullying without an appreciation of their classroom peer ecologies may invite resistance that worsens existing problems (McFarland, 2001). In the case of peer sexual harassment or boys who bully girls, the problem of teacher awareness is still more problematic (Berger & Rodkin, 2009; Orpíñas & Horne, 2006; Pellegrini, 2002; Rodkin & Fischer, 2003). Teachers should be well-informed about the social status and social network dynamics operating among their students for network-related teaching strategies to be maximally effective.
classroom management skills that help shape the structure and norms of peer ecologies. Chang (2003) found that when teachers were warm and caring, children were less rejecting of aggressive peers than when teachers had very negative beliefs about aggression. However, when teachers had negative beliefs about aggression, aggressive students perceived themselves as socially efficacious. Chang’s (2003) findings suggest that teachers’ best efforts at quashing aggression can unwittingly open the way for alternative authority structures conducive to the emergence of high status aggressors. Accurate understanding of a peer ecology is the platform from which intelligent decisions can be made about restructuring children’s groups, encouraging feasible social relationships, and anticipating possible conflict (see also Frey et al., this volume).

Aside from Frey et al. (2009), field intervention work on bullying may be in a similar state to research on prejudice reduction, where Paluck and Green (2009, p. 357) conclude that very little research “supports internally valid inferences and externally valid generalization.” Within this frame, some of the more promising techniques for teaching intergroup tolerance are methods based on social interdependence theory, such as jigsaw and other cooperative learning techniques, that consider the peer ecological structure of children’s relationships. Cooperative goal structures, in which children help one another, share resources, and act in trustworthy ways, promote school achievement and positive peer relations (Roseth et al., 2008). A focus on how teachers can scaffold the emergence of a positive classroom peer ecology may increase the likelihood that cooperative goal structures can take hold. On this score, it is noteworthy that Granovetter’s (1985) formulation of structural embeddedness concerned how economic trust is produced by specific, temporarily-ongoing relationships, as opposed to broad institutional arrangements or some generalized moral sense. The educational implication is that omnibus school policies (i.e., “institutional arrangements”) and pronouncements (i.e., “generalized moral sense”) are best complemented by an understanding of how knowledge and attitudes “penetrate irregularly and in differing degrees…through the details of social structure” in educational life (Granovetter, 1985, pp. 491, 493), namely, peer social ecologies.

Socioemotional learning standards, which encourage children to develop self-awareness and self-management skills, use these skills to establish and maintain positive relationships, and demonstrate decision-making and responsible behaviors (O’Brien, Resnik, & Collaborative for Academic, Social, and Emotional Learning, 2009), are strong complements to the ecological approach adopted here (e.g., Zins et al., 2007). In some settings it is difficult for teachers to stay abreast of changing peer dynamics that are not typically apparent to adults (Berger, Karimpour, & Rodkin, 2008; Frey et al., this volume; Rodkin & Karimpour, 2008). We have found that teachers greatly appreciate feedback that is based upon social network data from the aggregate perspective of their students. Teachers and administrators tell us that it would be highly useful to have their student support personnel periodically conduct such assessments, as was done in years past, and as is done currently with socioemotional learning standards. Accordingly, as we identify key teaching practices and classroom social dynamics, we will disseminate these results not just to scholars, but also to teachers and school support personnel as a component of bullying-reduction activities throughout North American schools. To paraphrase the apt conclusions of Paluck and Green (2009, p. 359), future progress in research on bullying lies along the path that Lewin suggested over sixty years ago: “hypothesis generation through field observation, and intervention testing with parallel laboratory and field experiments.” Lewin’s path is the high road that leads away from the haphazard mix of ideology and instinct that bedevils social management in education.
Teaching Practices, Classroom Peer Ecologies, and Bullying


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Figures

**Figure 1.** Conceptual model of teaching practices, classroom peer ecologies, and youth outcomes.

**Figure 2.** Status Hierarchies. Illustrations of (a) egalitarian and (b) hierarchical peer ecologies

(a) Egalitarian

(b) Hierarchical

**Figure 3.** Group Norms. Note the broad range of within-classroom correlations between peer rated aggression and being “liked most” in (a) Pennsylvania and (b) Illinois.

(a) Pennsylvania

(b) Illinois
**Figure 4. Tight-knittedness.** Illustrations of (a) tightly-knit and (b) loosely-knit peer ecologies.

(a) Tight-knit  
(b) Loose-knit

**Figure 5. Distinctiveness of subgroups.** Illustrations of (a) highly distinctive and (b) not very distinctive peer subgroups.

(a) Highly distinct  
(b) Not very distinct