

The Role of School-Related Peers and Social Networks in Human Development

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Abstract

This essay describes the foundational research on peers within schools, the recent advances in the field, and new challenges and opportunities for future research. Schools bring together children and youths for many hours of the day over many years. The intensity of interaction and judgment within of peers within the school setting heightens the potential impact on human development during the crucial adolescent years. Extant research on the effects of peers in school cuts across disciplinary lines and is of interest to developmental psychologists, economists, sociologists, and anthropologists, who observe the potential for peers to structure and reinforce status hierarchies and opportunities to learn, contribute to the development of personality, identity, interests, and motivation, and shape the cultures that emerge in schools, all of which may impact students' learning, educational attainment, and adult earnings. Social network methods combined with more readily available data on students' course taking in schools provides rich and promising new opportunities for future research.

INTRODUCTION

In modern society, education is a primary institution that teaches skills and socializes young people to fully participate in our economic, civic, and political institutions. Schools bring together children and youth of similar ages into classrooms and grade levels for many hours of the day where they learn academic, social, and civic skills and are evaluated, assessed, and judged in relation to peers. The social settings of the classroom and grade level as well as the curricular material and extracurricular activities are adapted as youth develop, grow, and gain capacity to handle more independent and complex academic challenges and social relationships. Whatever the grade level, the intensity of social interaction and judgment that students experience may heighten the impact of the hours spent in

school on many aspects of development beyond the acquisition of skills to include personality, interests, values, identity, and motivation.

Schools also provide a hub that defines the social boundaries for the community of families that are served. Over the course of childhood and adolescence, students will have logged many hours in classroom and school settings and even extra hours in extracurricular activities, parent outreach events, and other opportunities for interaction of peers, friends, and their families. Through these ongoing and at times intense interactions, the school can emerge as a venue to define a community, where it takes on a larger role in the residential neighborhood or other group bound by the commonality of experiences that emerge from sharing so many hours of the day over the years of childhood, adolescence, and even early adulthood (for students attending college). The schools a person attends often to contribute to his or her identity. In these ways, the social experiences that take place in schools may reinforce and add an additional dimension to the academic lessons for students.

Taken together, the school provides opportunities for the emergence of important and valuable social relationships, norms, obligations and exchanges of reciprocity that build trust, and shared information, goals, values, interests, and motivation among peers. The very nature of the activity that takes place at the school has the potential to uniquely shape the development of children, adolescents, and young adults, and as such constitutes an important venue for human development. These roles of peers within schools are of interest to developmental psychologists, economists, sociologists, and anthropologists, who observe the potential for peers to structure and reinforce status hierarchies and opportunities to learn, contribute to the development of personality, identity, interests, and motivation, and shape the cultures that emerge in schools, all of which may impact students' learning, educational attainment, and adult earnings. From the standpoint of scholars of education and education policy makers, schools represent a major investment for every developing and developed society. The potential of peers to either amplify or undermine the investments made in curriculum, administration, and teachers and other personnel mean that understanding the role of peers in schools is a priority. This essay describes the foundational research on peers within schools, the recent advances in the field, and new challenges and opportunities for future research.

FOUNDATIONAL RESEARCH

The classical study by Coleman (1961) of 10 northern Illinois high schools during the second half of the 1950s, *The Adolescent Society*, provided groundbreaking insights into schools as venues for the emergence of a social

system, each with a unique culture. Coleman observed cultures oriented toward adolescent rather than adult values and described social subsystems, or peer groups, where academic success and learning were not valued and popularity, sports, and being good-looking commanded esteem from peers; he argued that this adolescent society undermined the purpose of schools, which was academic. What was especially important was Coleman's observation that the school boundaries, in time and place, framed a social world with powerful forces that shaped adolescents' motivations and behaviors. Although Coleman's subsequent work elaborated on the complexity of factors that contribute to how a school's social system impacts students' achievement—notably the mixture of students' family racial and socioeconomic backgrounds (Coleman, 1966), the academic emphasis of the school (Coleman & Hoffer, 1987), social capital (Coleman, 1988), and parental involvement (Schneider & Coleman, 1993)—*The Adolescent Society* laid a strong theoretical foundation for many subsequent studies of schools and peer relations by recognizing the importance of the school boundaries as a frame for adolescent subcultures. Studies of school culture have illustrated the social side of school of schooling, describing types of social categories within schools, their origins, and their effects on youth's development.

An important theoretical distinction in the literature on social categories among peers in schools is whether or not the social categories are viewed as a mechanism that reinforces social class inequality in society. In a classical study of British adolescents, Willis (1977) described two groups of boys, both from working class families, one of which conformed to the demands of school and the other resisted the exploitation that they experienced at school and from their position in a stratified society. However, both groups ended up in working class jobs as adults and differed mainly in their acceptance of or resistance to the exploitation. Anthropologist Foley (2010) also observed social reproduction in a school in a small town in south Texas. Focusing on the school culture that developed around rituals such as Friday football games and other social activities, Foley showed how the racial divide between white and Latino students filtered into the every day life and social exchanges in the school. The way that race was reproduced in the interactions had major implications for students' opportunities. Focusing more on social class, linguist Eckert (1989) described two social categories of adolescents within a high school—the jocks and the burnouts—whose membership was aligned with the social class background. The jocks came from more socioeconomically privileged families, and Eckert argued that the social categories with which they identified at school as adolescents reproduced social inequality when they became adults. This happened because the social categories were accompanied by language and behaviors of the adolescents, who either bought into or opted out of investing in school. This impacted academic

success, which then shaped their opportunities during adulthood and reproduced the social inequality.

In contrast to the social reproduction approach, other studies describe social categories as a function of extracurricular activities, classroom activities, and the school organization and suggest that an affiliation with the category has consequences for the student's life, independent of social origin. For example, Eder and Kinney (1995) showed that social categories based on extracurricular activities are linked to students' popularity; the activities and categories reinforce gender differences among students and the link between activities and popularity is stronger for males than females. Milner (2004) recognized that there are important status differences inherent in the social categories in high school but argued that they are more complex than simply rooted in social class or gender characteristics, as some of the earlier work on adolescent subcultures suggested. Milner recognized the power of how a school is organized to affect students' every day activities and argued that the peer status systems within schools were an attempt to recapture control over their lives. Ironically, Milner argued, the teen status systems often had rigid social norms and definitions of youths' identities, even linking the identities to consumer-oriented behavior (for example, valuing one brand of jeans over another), serving to socialize youths into longer term consumers.

The linkage between the adolescent's identity formations to a social category is crucial for understanding the formation of peer subgroups in schools and the resources available to teenagers. Akerlof and Kranton (2002) took an economic perspective about why adolescents might affiliate with a particular identity, suggesting that adolescents would choose to identify with a particular social category based on a match between their own perceived characteristics (for example, a jock, a burnout, or a nerd) and the ideal that they hold for themselves. As economists, their interest in the affiliation is the "utility" or what resources are available to the adolescent because of the affiliation. Identity may shape who is more likely to be friends with the adolescents, what others think of and how they react to him or her, and it also shapes behavior, for example, how much effort the student is likely to put into school.

Developmental psychologists use a slightly different approach to explaining *why* adolescents might identify with some social categories over others, but arrive at similar conclusions, that identification is a function of personality, activities, often related to gendered notions, and reflects motivations, interests, and values as well as opportunities for teens to form friendships more easily. For example, Stone, Barber, and Eccles (2008) found that aptitude in sports, in academics, along with other characteristics of the adolescent (such as their socioeconomic status, appearance, and motivation) all

contribute to predicting their identification with one social category over another. Understanding these social processes is important because of how they impact the resources that are available to adolescents as they develop.

The connection between the adolescent's identity and social category is also important for understanding possible consequences of peer affiliation. Some of the same factors that predict an adolescent's affiliation will also shape his or her later personality development, curricular and extracurricular participation, academic achievement, and even health behaviors. A key feature of studies of peer groups is in the recognition of how an affiliation with a group of individuals with shared characteristics and socially defined categories can impact developmental outcomes beyond what would be expected through one-on-one relationships among friends. Essentially, the potential of the group for impacting an individual's outcomes is more than the sum of its parts.

One of the most basic potential outcomes from an identification or affiliation with a social category or a group is in the possibility of forming friendships, as friendships can be an important source of information, help, and emotional support. Homophily—birds of a feather flocking together, or the tendency of people to form relationships with others like them—is a long recognized sociological principle (Blau, 1977; Lazarsfeld & Merton, 1954; McPherson, Smith-Lovin, & Cook, 2001). The commonality that draws people together as friends may be based on family characteristics, such as race or socioeconomic status, or tastes, preferences, or interests, or shared experiences, such as those in extracurricular activities, grade levels, or courses taken together. Moreover, these factors combine to produce opportunity for the formation of friendships. For example, Zeng and Xie (2008) showed how adolescents formed friendships along racial lines when they shared grade levels in school. In addition, Epstein (1983) showed that students formed friendships with other students when they shared socioeconomic status. Thus, in general, social inequality is reproduced (in other words, a student's achievement depends on his or her parents' status); however, if the organization of a classroom encouraged social interaction among students from diverse backgrounds, then students formed relationships between students of different backgrounds and effectively disrupted the reproduction of social inequality.

The formation of friendships along the lines of shared activities, such as those based on course taking or extracurricular activities, is interesting for several reasons. First, this locates the school as a place where interracial friendships may form and foster more open attitudes about diversity. Second, from a theoretical perspective, it represents an intersection of students' choices (of friendships, and perhaps interest in the activity), sometimes referred to as *individual agency*, and the structure of the opportunities to

participate in the activity. Schools themselves provide this type of structured opportunity for adolescents to form friendships at school. Most of the empirical work on friendships, peers, and schools has focused on adolescents in high school or middle school because adolescents tend to have a heightened awareness of and sensitivity to their social worlds. However, others have concentrated on school structured activities and friendship formation at the elementary school level, such as through ability grouping (Hallinan & Sørensen, 1985), or on college campuses in dormitories (T. Stinebrickner & T. R. Stinebrickner, 2006).

Whatever the age group of the students, the ways that schools structure opportunities for friendships to develop and be maintained is important for human development and the long run opportunities that schools provide for students to succeed or fail. These opportunities are often structured to bring together students, for example through extracurricular activities or courses taken together by students who have similar interests or something else in common, sometimes referred to as *peers*. These peer groups can then reinforce differences within the larger student body and through different access to social resources.

Just as students may choose their friends differently depending on how opportunities to interact are organized, there are other effects of peers and the contexts in which the friendships may form, as well. Friendships and settings that include potential friends not only have implications for students' identity development and friendship formation, as described earlier, but they may also have instrumental utility. More specifically, these settings tend to foster a normative climate whereby students are encouraged to exert more or less effort in school may help one another with homework or provide emotional support, share useful information, or help to define how teachers and other school personnel evaluate a student.

Through encouraging some behaviors over others, the peer groups may have influence beyond academic behavior. Peers have known effects on health-related behaviors such as smoking, drinking, mental health, or weight control, and civic and political participation. For example, sociologists Wilkinson and Pearson (2009) found that a heteronormative culture in high schools, which was heightened through a culture where football and religion have a larger presence and are more highly valued, had a negative impact on the emotional well-being, fighting, and academic failure of youth who were same-sex attracted rather than heterosexual in their sexual attraction. In other words, the norms that pressure adolescents to fit into the local school culture have far reaching implications for their development. Although generally speaking, family background resources, such as parents' level of education, tend to give some students academic advantages over

others, these peer settings may provide alternative resources for some students to get ahead or others to fall behind.

NEW DIRECTIONS IN RESEARCH

We know that peers and school contexts influence human development in important ways, in large part because people are fundamentally social in nature. Yet, measurement of these processes is challenging for a number of reasons. First, people select into the contexts that they also are influenced by, making it difficult to know whether an individual's predisposition or the context itself accounts for any particular outcome. If one cannot identify the direction of a relationship, then it is impossible to know whether it is causal.

Second, measuring the effects of peers, social networks of friends, and other contexts within a school is difficult because it requires identifying and defining the relevant group to measure. As we have seen from the foundational research described earlier, some scholars have used identification with a social category or a racial and ethnic, gender or some other characteristic to define peers, and others have used a structural feature of a school such as a grade level, an ability group, an extracurricular activity, or college dormitory to predict the peer group that contributes to the formation of friendships or other peer group effects. These social categories that reflect and shape an adolescents' identity may be defined through self-reported identification (such as a student might report on a questionnaire), through participation in activities such as extracurricular sports or another club or through social network affiliation.

Activities structured by schools, such as extracurricular activities and even grade levels, not only define the students' identities but also shape their access to resources. Social network approaches have long been used to identify groups or cliques of friends and provide an alternative way to define and estimate peer groups. Recently, network approaches have been used to identify clusters of courses taken by students within a school (Frank *et al.*, 2008) and likely structure students' opportunities for social interaction, both in and out of school over the years. This network methodology offers a way to estimate the effects of the group on adolescents' academic and social behavior and well-being.

All of these settings provide venues for coming in contact with potential friends. Potential friends may be even more influential than friends; a friend is a known resource but resources from a potential friend are uncertain. Consequently, the adolescent may try even harder to conform to the norms in an attempt to earn a new friendship from a pool of potential friends (Giordano, 2003). The size and character of the group is also an important consideration when thinking about the effects of peers because these factors have

implications for the type of social interactions that emerge. For example, an entire school or grade level has cultures and rituals that may exert normative influences but may be too large to affect all students in the same way because students also perceive differences among members of such a large group. The clusters of students taking courses together, based on the network approach described earlier, represent an important advance in the field because they can be defined empirically and uniquely for every school. They likely capture how students spend their time across sets of classrooms and also pinpoint the students with greater chances of coming in contact with one another between classes and when studying. In this way, the clusters measure something about students' authentic experiences in schools.

KEY ISSUES FOR THE FUTURE

It is important to recognize that students may have more than one affiliation and therefore may be subject to multiple contextual influences of peers. This might happen if students are very involved in extracurricular activities or activities in another setting. Similarly, as students progress through their years in school, from freshman through the senior year of high school, they likely experience several distinct peer groups and contexts. Furthermore, some students may transfer between schools, and such a move would likely dramatically alter peer groups. The influence of these multiple contexts, either through concurrent membership or because of consecutive affiliation, is a key area of future research. Without proper measurement of the multiple contexts, the estimation of any particular context effect might be inaccurate. Beyond measurement, it is important to have a theoretical reason for estimating the effect of a peer affiliation, social network, or other context on human development as the theory helps to ensure that an estimated effect is not due to random chance.

Overall, we know that school peer groups and the social networks that form within schools have the potential to exert powerful forces on the development of children, adolescents, and young adults. Some of these groups come about because people who share similar characteristics (for example, their racial or ethnic identity) are more likely to affiliate with one another. However, other groups are formed through shared activities and experiences. These opportunities to participate in activities and courses are structured by school administrators and have implications for the social networks that students develop. Importantly, they have a substantial impact on human development and opportunities that have long run effects. We currently have very little systematic knowledge about how opportunity structures contribute to the emergence of productive social networks. This is an important issue for the future.

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Chandra Muller is Alma Cowden Madden Professor in the sociology department at the University of Texas at Austin. Her research is on how schools, including the contexts within schools, shape educational attainment, and other life course outcomes, such as work and health. Of primary interest is disparities in school experiences according to gender, race and ethnicity, social class, and disability, immigration, or language minority status. One area of focus is on STEM (science, technology, engineering, and math) preparation and careers. In addition, her 2013 book, *Coming of Political Age: American Schools and the Civic Development of Immigrant Youth*, with Rebecca Callahan, investigated the effects of education on civic outcomes. Currently, she is the principal investigator, with co-investigators Sandra Black, Eric Grodsky, and John Robert Warren, of a study that is following up *High School and Beyond* sample members, who are now around 50 years old, to study the long-term effects of education.

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