Measuring Environment Across the Life Span

EMERGING METHODS AND CONCEPTS

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MEASURING THE PEER ENVIRONMENT OF AMERICAN ADOLESCENTS

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Adolescence is, by definition, a period of transition. Individuals during this stage of life are often understood primarily in terms of what they are becoming rather than what they are. Decades ago, the tendency was to portray and interpret adolescence largely in terms of a core set of internal, biological changes: pubertal transformations (Tanner, 1972); insurgence of sexual drives (Freud, 1958), and emergence of new cognitive abilities (Piaget, 1958). Within an "average, expectable environment" (Scarr, 1992), theorists contended, these would unfold in a predictable sequence to create the "essence" of adolescence. Over time, however, it has become increasingly apparent that the meaning or impact of internal or biological changes is heavily contingent on the young person's environment (Petersen, 1993). In American society, one feature of the environment that seems to take center stage at adolescence is the social world of peers. Studies of peer influences and peer relationships during adolescence have been extensive. Yet, the impact of peers on adolescent development (as well as on

adolescents' abilities to shape the peer environment) remains unclear, largely because of nagging uncertainties about how best to conceptualize and measure the peer environment. In this chapter I hope to shed some light on these measurement issues by assessing them from the perspective of a new conceptualization of the adolescent peer environment.

The social world of peers among youth in contemporary societies is deceptively complex. This chapter is not intended as an exhaustive review of adolescents' peer environment but as an illustrative analysis of common themes and major methodological challenges in studies of this environment, with some suggestions for future research. I begin with a sampling of the issues investigators have entertained in their studies of the peer context, with special attention to problems they have encountered in measuring this environment. Then, I illustrate how a new conceptual model of the adolescent peer environment can help direct future studies of peer influences on adolescents.

Four points are emphasized. First, the adolescent peer environment is a multilevel, multicontextual phenomenon. It contains a variety of structures and relationships that can be arranged hierarchically into several levels of immediacy or concreteness to the person. Interactions and influence processes are not necessarily equivalent, in form or effect, at each of these levels. Second, the peer environment is nested in a broader set of social and interpersonal contexts, which help to shape the structure of the peer context and its influence on individual adolescents. Third, features of the peer environment are contingent on individual characteristics, many of which change over adolescence. Finally, it is wiser to conceive of the relationship between individuals and the peer environment as reciprocal rather than unidirectional (to consider how individuals and the peer environment influence each other, rather than focusing exclusively on peer influences on adolescents).

SCOPE OF THE ADOLESCENT PEER ENVIRONMENT

Before surveying some common issues in studies of the peer environment among adolescents, it may be useful to describe the scope and substance of that environment. In current American society, adolescents typically enjoy increasing levels of autonomy without necessarily shouldering greater responsibilities in common adult roles. Emotional dependence on family diminishes, as does the young person's reliance on family as the center of social activities (Steinberg, 1990). School commitments rarely venture much beyond 6 hours of class a day, and there is nominal time for homework or an extracurricular activity or two (Thomas, 1993). Involvement in work, caretaking, and other common adult roles is limited, if present at all (Erikson, 1968). This leaves plenty of time and "psychic

energy" to invest in peers, which is manifested in increases in time spent with peers rather than with adults (Csikszentmihalyi & Larson, 1984) and in the importance accorded to peer relationships (Brown, Eicher, & Petrie, 1986; J. C. Coleman, 1974).

The form and function of peer relationships expand during this stage of life. Peers continue to provide emotional and instrumental support and to organize leisure activities, as they have in childhood, but they also become a component of sexual gratification and identity development. This introduces new types of relationships or affiliations, most notably romantic partner and crowd member, to the young person's repertoire of peer associations. Indeed, adolescents negotiate a broad array of relationships within the peer environment. Some are formal, or directed by major social institutions such as the school (e.g., lab partners and teammates), the workplace (coworkers), or the church or synagogue (fellow youth group members). Others are informal and range from short-term (e.g., one-time sexual partners) or circumscribed associations ("hiking buddies" vs. "people I party with") to long-term and intimate companions (close friends or steady boyfriend or girlfriend). Researchers often fail to discriminate among this diverse assortment of peer associates; they treat them as equally important and influential in young people's lives. In this chapter I point out the dangers of dealing with the peer environment in this fashion.

COMMON ISSUES IN STUDYING THE PEER ENVIRONMENT

Understandably, in view of the scope of adolescent peer relations, studies of teenagers' peer environment are remarkably diverse, both in the topic of study and in the types of peer associates examined. Generally, however, investigators have focused on three major facets of the peer environment: the *structure* of peer groups, the *content* of peer relationships, and the *processes* of peer interaction and influence. Work in each of these areas is illustrated, with special emphasis on methodological approaches and issues.

Structure of Peer Groups

Some researchers have been preoccupied with how the adolescent peer environment is organized into discernible groups and how (or how effectively) these groups are interrelated. These issues are interesting in their own right, but researchers have also been concerned with the connections between peer group affiliations and a variety of outcomes. For example, one of the strongest correlates of delinquent activity is the degree of delinquency within an adolescent's friendship group (Patterson & Dishion, 1985); there are also substantial differences among members of dif-

ferent sociometric groupings or peer crowds in drug use (Ennett & Bauman, 1993), delinquency (Cusick, 1973), sexual activity (Dolcini & Adler, 1994), and prosocial behaviors such as academic achievement (Brown, Lamborn, Mounts, & Steinberg, 1993; Lesko, 1988). In this work, it is sensible to distinguish between interaction-based groupings of peers, most commonly referred to as *friendship groups* or *cliques*, and the more abstract groupings that emerge in adolescence to reflect individuals' status, image, or reputation among peers.

Friendship Groups

The most classic study of friendship groups is Dunphy's (1969) assessment of peer group structures among Australian youth. Relying heavily on participant observation, Dunphy discovered two levels of peer group organization: the "clique," numbering six to eight adolescents who interacted almost daily and regarded one another as good friends, and the "crowd," comprising several cliques that occasionally combined for major social activities (such as a weekend party). By following groups over the course of an academic year and involving himself in groups of different ages, Dunphy also discerned a developmental sequence to this structure. The isolated, monosexual cliques that dominated early adolescence gave way by middle adolescence to heterosexual crowds, which in turn degenerated into fairly autonomous but mixed sex cliques by the end of adolescence. The primary function of this evolving crowd structure, Dunphy concluded, was to socialize young people into new heterosocial roles and interests (romantic and sexual partner).

Dunphy's (1969) study is noteworthy not only for its interesting findings but also for methodological reasons. The author supplemented his extensive participant observations with individual interviews and diaries that participants kept of daily social activities. Multiple data sources helped Dunphy to discern weaknesses in specific methodologies. In individual interviews, for example, most participants fiercely denied that their groups had leaders, even though, in participant observations, leaders were an obvious and essential feature of the groups.

With the advent of more powerful computers and software, new methodologies have appeared for mapping friendship networks. Some derive the structure of cliques from lists participants provide of their close friends (Ennett & Bauman, 1993; Shrum & Cheek, 1986); others depend on individuals' reports of friendship groupings among peers, which are combined to derive a "social–cognitive map" of the clique structure (Cairns, Perrin, & Cairns, 1985). These approaches are capable of tracking the stability of friendship cliques over time (discussed later) and also of tracing developmental changes in the organization of cliques. Shrum and Cheek, for example, reported that, across adolescence, a pattern of clearly discernible cliques was replaced by a more loose-knit structure in which increasing numbers of teenagers serve as "liaisons," linking two or three cliques by virtue of their friendships with members of more than one group. This is reasonably consistent with Dunphy's (1969) observation of individual cliques combining for larger social activities.

Studies based on these social network programs do have drawbacks, however. Most notably, the programs work well only if 75%–85% of the peer population provides usable data—a daunting task if one wishes to lay out the peer group structure in an average-sized American secondary school.

Reputation-Based Groups

Despite his emphasis on interaction patterns and heterosocial activities, Dunphy (1969) did acknowledge another dynamic in the Australian adolescent peer system: groups identified not so much by interaction patterns (who adolescents hung out with) as by reputation. Behavior patterns, dress and grooming styles, orientations toward authority, and activity choices clearly differentiated a group called the "surfies" from one labeled "rockers." These reputation-based clusters point to another facet of peer group structure. Sometimes researchers use their own conceptual categories to construct these groups (e.g., work on sociometric status); other times they focus on groups that emerge from adolescents' own understanding of the peer context (such as Dunphy's rockers and surfies).

Using a technique developed to study sociometric status among children, investigators have asked adolescents to provide nominations or ratings of peers in a circumscribed setting (usually a classroom) as desirable or undesirable interaction partners. These are used to identify clusters of adolescents who, relative to their peers in this setting, are "popular," "rejected," or "neglected." Efforts are then made to discern characteristics that lead to one or the other of these labels and to the consequences of one's reputational groupings for a variety of outcome measures. The chief drawback of sociometric ratings is that the technique is designed for a small rating pool: 15 to 30 students (about the size of one classroom). Unlike elementary students, who typically stay with one classroom of students for most of the day, secondary students interact with a broader array of peers and may not even know many of their classmates. Confining sociometric ratings to peers in one classroom distorts the nature of the adolescent peer environment; asking adolescents to rate a much broader array of peers becomes an odious task.

More important, adolescents seem to incorporate sociometric status into their own lexicon of major reputation-based groups within the peer context. These groups are referred to by many researchers as *crowds* (Brown, 1990). Some crowd types seem to persist across time and place (e.g., jocks,

nerds, populars, and brains), whereas others seem to arise from the specific features of a particular community—Buff's (1970) "dupers"—or historical moment—the smokers of the 1950s, the hippies of the 1960s, and the metal heads of the 1990s. Much of this work is based on ethnographic data (Eder, 1985; Larkin, 1979; Lesko, 1988). Kinney (1993), for example, traced how the peer crowd structure expanded from middle school to high school in one midwestern community, allowing teenagers who had previously been relegated to the masses of "dweebs" to achieve some status as a member of one of the newly emerging crowds in high school. Others have interviewed a small and select cadre of expert informants (prominent members of various crowds), whose "social type ratings" of classmates are combined to ascertain the crowd affiliations of a school's entire student body (Brown, et al., 1993; Schwendinger & Schwendinger, 1985).

Such peer crowd affiliations help establish the more specific context within the broader peer environment in which an individual is located and discern the specific norms or influence processes to which the individual is most likely to be exposed. For example, Clasen and Brown (1985) found that individuals in different crowds (ascertained by social type ratings) perceived markedly different patterns of peer pressure from friends. These observations are affirmed by ethnographers who discuss the different normative climate relative to school achievement or delinquent activity in various crowds (e.g., see Deyhle, 1986; Matute-Bianchi, 1986).

Yet, crowds do not function as isolated entities. Ethnographic studies often trace the alliances and enmities that exist between particular groups, directing and constraining choice of partners in other peer relationships (Eckert, 1989; Eder, 1985; Larkin, 1979). More recently, multidimensional scaling techniques have been used to map the "social distance" among crowds and to identify the major dimensions along which crowds are differentiated in a specific school or community (Brown, Dolcini, & Leventhal, 1997). Social type ratings reveal that many, if not most, adolescents establish an image among peers that straddles two or more crowds, so they may be subjected to influences of multiple peer groups (Brown, 1992).

Ethnography is a particularly useful methodology in studies of peer crowds because it encourages open-minded exploration of the unique features of peer group structures in specific settings. Gaining access and trust within groups, however, is a time-consuming process. Moreover, close association with members of one crowd often compromises one's credibility with another group, so ethnographers are limited in the number of groups that they can explore in-depth. As an alternative, the social type rating system (Schwendinger & Schwendinger, 1985) is appealing: Crowd affiliations for a large group of students can be derived quickly and efficiently from ratings of a small number of informants. However, it is labor intensive and its reliability remains untested. Investigators have not ascertained whether two separate groups of informants classify classmates comparably

or whether the rating system is effective in large multiethnic high schools in urban areas, in which students often do not know more than half of their classmates well enough to categorize them into crowds. Peer nomination systems also have yet to be tested in populations of youth that do not contain European Americans. It is unclear just how prominent peer crowds are, for example, in schools with almost exclusively African American, Hispanic, or Native American populations (Kinney, 1995).

Stability of Peer Group Structure

A key factor in the structure of peer groups is their stability: Do adolescents maintain the same friendships for a long time? Does a friendship clique, once formed, manage to stick together, or is there a substantial turnover in membership? Once associated with a particular crowd, do adolescents maintain that reputation? Evidence from the small corpus of longitudinal studies capable of addressing the questions suggests that groups and relationships within the peer environment are relatively fluid. Hogue and Steinberg (1995) asked a sample of high school students to list their five closest friends at two time points 1 year apart; for less than half of the students at least one name from their original list carried over to their follow-up list.

Using the social–cognitive mapping method, Cairns, Leung, Buchanan, and Cairns (1995) found that over a very short period (3 weeks), less than 5% of the cliques named by a sample of 7th graders remained identical, but most cliques (90%) were still recognizable if the criterion was that at least 50% of original clique members were still associated with the group at follow-up. Stability of crowd affiliations has rarely been reported. Brown, Freeman, Huang, and Mounts (1992) found that, over a 2-year period, only 41% of adolescents claimed membership in the same crowd, although the percentage did climb with age—from 34% of 7th graders to 53% of 10th graders.

There is some question, however, about the reliability of stability analyses that are based on self-report data or peer ratings because the participant pool is rarely exactly the same in these longitudinal studies. If the data for calculating friendship networks or crowd affiliations come from even moderately different samples of reporters at the two time points, ostensible changes in group structure or membership could, instead, be a function of rating samples. Information from a more stable and consistent set of observers (teachers, parents, or an ethnographer) might seem more reliable. Yet, this is doubtful because adolescents tend to conduct their peer interactions *away* from the watchful eyes of adults. It does seem clear, however, that peer group affiliations are more stable among central than peripheral group members; central group members are the individuals with the most linkages to other clique members or the adolescents most consis-

tently associated by peers with a given crowd (Cairns et al., 1995). Yet, this is also a potential methodological problem. To the extent that studies are based primarily on central group members (as is often the case, for example, in ethnographic studies), findings may distort the true dynamics of the group and its impact on individual adolescents.

Summary

Efforts to chart the structure of the peer environment have distinguished interaction-based and reputation-based groupings of peers, noting age-related changes and influences from the broader social context in the pattern of relationships among cliques or crowds. Methodologically, ethnography and peer-rating techniques dominate these studies, although each approach has shortcomings that compromise its ability to chart the structure of adolescent peer groups effectively.

Content of Peer Relationships

In addition to issues of peer group structure, researchers have been concerned with the content or character of particular relationships within the peer environment. Three different lines of investigation illustrate research in this domain: studies of youth culture, studies of the features of friendship or romantic relationships in adolescence, and research on the quality of friendship.

Youth Culture

Research on youth culture is predicated on the assumption that, at least in general terms, young people share a common set of values, lifestyles, or a meaning system that is somehow distinctive from the culture of the community, ethnic group, or the broader (and largely adult-controlled) society in which they live. One way of identifying youth culture norms is simply to assess the mean or modal response of adolescents as a whole (or a random sample of the adolescent population) on a particular assessment instrument (e.g., Sebald, 1981). An alternative is to identify the most powerful or prestigious group within the peer environment and to study that group's attitudes and activities. J. S. Coleman (1961), for example, maintained that every secondary school features a "leading crowd" to which most students aspire, and their primary means of gaining membership is to follow the dicta of that crowd. Largely on the basis of survey data among adolescents and their parents, Coleman used students' descriptions of the leading crowd to pinpoint the major conflicts in values and aspirations between adolescents and the adult generation.

A third strategy of exploring the youth culture involves studies of the media used to convey this culture, most notably, rock music. This more

anthropological approach assumes that lyrics of popular songs, or the antics of popular rock performers, reveal to young people the essential values and orientations endorsed by their peers, the "normative climate" of the peer environment. To the extent that adolescents are exposed to these messages (or involve themselves in media portrayals of youth culture themes and symbols), they will subscribe—in word and deed—to the basic tenets of that culture (Roe, 1992; Walker, 1988).

Researchers are inclined to portray the youth culture as a major source of influence on individual adolescents' attitudes and behavior. Investigators have been particularly concerned with how youth culture norms differ from those of adult society and how these differences (or the degree of conflict in values) help explain young people's attitudes or behavior—particularly attitudes and behaviors judged deviant by the broader society (J. S. Coleman, 1961; Feueur, 1969; Keniston, 1968). The connection, however, between youth culture and individual behavior is not well established, and it is unclear which of these three research strategies provides the most valid measure of the youth culture. Indeed, the diversity of themes or styles inherent in rock music (Arnett, 1995) and the apparent inattentiveness of many young people to the leading crowd (Cohen, 1976; Eckert, 1989; Larkin, 1979) cast doubt on the image of youth culture as a monolithic force in the peer environment. The role of the youth culture in shaping young people's behavior, as well as its very existence, remains in doubt.

Features of Dyadic Relationships

Studies of the content of peer relationships also focus on specific features of friendships or romantic relationships. Well-known in this area are investigations that trace developmental changes in the characteristics that young people regard as central to close friendships, based primarily on content analyses of responses to open-ended questions about friendship expectations. From an emphasis on sharing activities in childhood, there is a shift in early adolescence toward loyalty, trust, and exclusivity, which in turn gives way by middle or late adolescence to an emphasis on a shared history and respect for the partner's interests and relational needs outside the friendship (Bukowski, Newcomb, & Hoza, 1987; LaGaipa, 1979). In a similar vein, using self-report rating scales, investigators have shown age differences across adolescence in levels of intimacy, conflict, social support, and other particular features of friendships (Buhrmester, 1990; Sharabany, Gershoni, & Hofman, 1981). Such factors highlight the differing bases of adolescents' relationships with peers as opposed to family members, particularly parents (Youniss & Smollar, 1985).

Work on romantic relationships is much less well developed, but there have been enough studies to affirm that the central criteria for these relationships differ across demographic groupings. Girls regard intimacy and

companionship as more central than sex in romantic relationships; boys display the opposite ordering (Hendrick & Hendrick, 1994). Dating relationships in early adolescence often appear to be "simple social interchanges," whereas by later adolescence they typically evolve into committed relationships (Feinstein & Ardon, 1973).

Because the norms of friendship and romantic attachments are quite different, one cannot assume (as many investigators do) that asking adolescents about their boyfriend or girlfriend is equivalent to inquiring about their closest relationship with an opposite-sex peer. In fact, with considerable demographic variability in the basic definition of romantic relationships, it is a challenge to word questions about them in such a way that all respondents select the appropriate relationship on which to base answers to questions. The label "boyfriend or girlfriend" is simple and straightforward but inappropriate for samples that include gay youth. Indeed, gathering reliable information about gay romantic relationships is especially challenging because of the social sanctions against such relationships, especially during the teenage years (Savin-Williams, 1994).

Much of an adolescent's relationship with a specific friend or lover is carried out in private. Teenagers are likely to treat or respond to their friend or lover differently in private than in a public setting, such as within the context of the friendship group (Cusick, 1973). This limits the applicability of ethnography or participant observation and forces investigators to rely on self-report data to study the features of friendships and romantic relationships. Investigators rarely attempt to consider perceptions of the relationship among both members of the dyad (but see Shulman, 1993). In fact, respondents are often asked to rate characteristics of their friendships *in general* rather than to specify features of each close associate—a strategy that may obscure the influence of relational features to major outcome variables that researchers want to address (Berndt & Keefe, 1995).

Quality of Relationships

A more specific feature of peer relationships that is gaining attention is the *quality* of the relationship. The impetus for these studies stems from social control theory (Hirschi, 1969), which stipulates that delinquent adolescents engage in deviance because they do not have strong bonds to conventional social institutions and because they are relatively incapable of forming constructive, nurturing relationships with peers. This begs the issue of whether adolescents with deviantly oriented friends engage in more delinquency because of the deviant lifestyles of their friends or because of the poor quality of these friendships. Two methodological approaches are common in these studies: One is to ask adolescents to rate the quality of

their friendships on various dimensions (supportiveness, trust, rivalry, and so forth; e.g., see Berndt & Perry, 1986); the other is to videotape a friendship interaction in a laboratory setting, then rate the interaction on the dimensions of interest (Dishion, Andrews, & Crosby, 1995). The latter strategy obviates potential biases of "impression management" in responses to self-report surveys; it also allows comparisons between interactions with close friends, acquaintances, or strangers. Its drawback, of course, is that behavior in a laboratory setting may differ substantially from behavior in the "real" peer environment.

Summary

Studies of the content of peer relationships cover a diverse array of relationship characteristics and span a number of levels of the peer environment—from the youth culture as a whole to the specifics of a particular friendship or romantic attachment. Because of adolescents' increasing autonomy from adults and the intimacy expected in their dyadic relationships, it is no longer easy to observe interactions to assess the content of relationships. Thus, investigators are forced to rely extensively on self-report measures. Some alternative strategies are available, however: anthropological approaches at the level of youth culture and controlled laboratory observations of dyadic interactions. Many issues in this area are still open to debate: whether features of a specific friendship or romantic relationship differ appreciably from features of the friendship group as a whole; which level of relationship is most salient to outcome variables of interest; and whether there is a recognizable, general youth culture, and if so, how it is communicated to individuals. It is also important to extend analyses beyond the middle-class, European American youth who have dominated samples to date; emerging research suggests that characteristics of peer relationships may be quite different among adolescents of different social or ethnic backgrounds (Fordham & Ogbu, 1986; Hamm, 1993; Zisman & Wilson, 1992).

As analyses move from a general (youth culture) to a more specific level (assessment of dyadic attachments), there is greater opportunity to explore reciprocal levels of influence—how adolescents shape and are shaped by the peer environment. In this regard, it is surprising to see so little work on the process of selecting or abandoning particular peer associates. Adolescents are insistent that friendships, and even romantic affiliations, are not carefully planned; they just happen. The same cannot be said about attachments to formal peer groups, however: clubs, church groups, sports teams, and so forth. Adolescents' efforts to shape the content of the peer environment by their selection of these particular affiliations deserve closer scrutiny.

Peer Interaction and Influence Processes

Both the structure and the content of peer relationships clearly affect adolescent development and behavior. Yet, researchers remain most concerned with the processes by which peers influence teenagers. Indeed, investigators have been so preoccupied with charting processes of peer influences that they have grossly neglected the bidirectionality of this process—the fact that individuals make concerted efforts to shape their peer environment, rather than merely being shaped by it. Studies concerning both directions of influence are illustrated.

Peer Influence

Researchers have used a variety of methods to operationalize peer influence on adolescents. One of the earliest grew out of laboratory studies of conformity behavior among college students or adults. In one such study, children and adolescents were seated with a group of unknown peers and were then given a series of problems in which they had to identify which line was the same length as a stimulus line (Costanzo & Shaw, 1966). The other participants, all confederates of the experimenter, always answered before the target respondent and, on prespecified items, gave consistently wrong answers. Costanzo and Shaw found that young people's willingness to conform to peers' incorrect responses declined with age and varied inversely with the strength of their self-concept. Such results, though intriguing, raised several validity-oriented questions: Would youngsters conform to the behavior of close friends (rather than unknown peers) in social situations (rather than an academic task) in which the appropriate (socially sanctioned) response was clear-cut (rather than ambiguous)?

As an alternative strategy that could address these concerns, some investigators administered a self-report instrument with hypothetical situations in which close friends urged the respondent to join in an activity that he or she either felt was wrong (antisocial items) or did not want to do as much as another activity (peer socializing items). Respondents indicated how sure they were that they would or would not conform to their friends' request or demands (e.g., Berndt, 1979). Results with this measure demonstrated an inverted U-shaped developmental curve, with compliance peaking around eighth grade, differing by type of activity (weaker for antisocial items) and by gender within type (boys more conforming than girls to antisocial activities). Scores on this instrument have been linked to a variety of attributes and outcomes among adolescents, but they seem to reflect conformity dispositions rather than behavior, and they still do not assess the amount or type of peer pressure adolescents actually encounter.

To catalog peer pressures actually faced by youth, Clasen and Brown (1985) developed the Peer Pressure Inventory (PPI), measuring the degree

and direction of pressure adolescents encountered from friends on a wide assortment of behaviors. The instrument pointed to different domains of peer pressure that featured different developmental trajectories and, in conjunction with conformity disposition as measured by Berndt's (1979) instrument, were significantly associated with antisocial activity and peer socializing (Brown, Clasen, & Eicher, 1986). Yet, low mean scores on the PPI scales raise doubts about its validity; at best, it is a good measure of explicit pressures adolescents face from friends. It does not cover other types of peer influence (Kandel & Andrews, 1987).

Participant observation is a promising alternative to contrived situation or self-report methodologies for assessing peer influences. This technique is especially useful in tracing the sequence of influence strategies to which adolescents are exposed in their "career" as members of a particular clique (Eder, 1985). Drawing from opportunities to observe their own children's interactions with friends, Adler and Adler (1995) cataloged the strategies group leaders used in preadolescence to recruit, retain, and eject members from the popular clique. Similar processes are probably operative in adolescent groups but have not been as carefully examined (but see Eder, 1985, and Kinney, 1993). These strategies are too subtle and dynamic to be easily captured by other methodologies. Yet, it is more difficult for adults to gain access to adolescent groups than to children's groups, and this approach will not work with dyadic relationships because the addition of an observer to one-on-one interactions is much too noticeable and intrusive.

A more straightforward—and by far the most common—approach to measuring peer influence is to correlate an individual's behavior with that of her or his friend, on the assumption that if friends share certain characteristics, it is because an individual has been influenced by the friend. The inadequacy of this approach is obvious, however (Kandel, 1978): Friends are similar to one another, to a large degree, because adolescents choose as friends those peers who have much in common with them. Longitudinal studies charting behavioral or attitudinal change over time in the direction of a friend's level on a particular attribute suggest that friends' influence on teenagers is actually quite modest. This is especially true if the friend's own report of attitudes or behavior is used rather than the target adolescent's perception of the friend's attributes (Fisher & Bauman, 1988; Kandel, 1978).

All of these approaches fall short of capturing a curious reality of peer pressure and peer influence among adolescents: namely, that each adolescent is concurrently the recipient and initiator of influence. Consider, for example, the common assumption that teenagers encounter pressure from their friendship group to behave in a certain way. One could imagine a four-person group in which Alisha is influenced by Betty, Coletta, and Diaz to attend (or stay away from) a party. To be conceptually consistent, how-

ever, one must also regard Alisha as part of the influence (along with Coletta and Diaz) on Betty in regards to the party. How can one consider the influence of the friendship group on Alisha's actions without concurrently considering Alisha's role in influencing each other peer in the group? Researchers' predilection is to simply pick one girl as the target, treat the rest of the group as an influencing agent, and approach the issue in a strictly linear fashion. Results of these studies fall well short of capturing the complex dynamics of influence processes in the peer environment.

Impression Management

In contrast to the extensive work on how peers pressure or influence adolescents, there is only a smattering of studies on how individuals influence their peers, especially peers' impression of the self (impression management). For example, Juvonen and Murdock (1995) presented fourth, sixth, and eighth graders with hypothetical situations in which they had done either poorly or really well on an exam, then asked respondents to indicate how they would explain their performance to a teacher and to the popular peers in the class. There was a decrease across age groups in respondents' willingness to convey to peers that they had worked hard when they succeeded on the exam—even though respondents were consistently likely to convey this message to teachers. Furthermore, eighth graders were more likely to assert that strong effort on school work would damage a student's reputation among popular peers. Studies such as this reveal adolescents' efforts to "read" and respond to norms and pressures within the peer group, to essentially influence the influencers. Of course, the young people's behavior was still more reactive than proactive: They were responding to subtle, unspoken peer pressures not to work hard at school, rather than trying to shape peer norms about academic effort.

A better perspective on the cycle of influence within the peer environment comes from ethnographic studies. Eder (1985) recounted the efforts of middle school girls attempting to gain entry into the popular clique. By maintaining friendly relations with all of their peers, making the cheerleading squad, or being a good friend of one of the popular girls, several students were accepted into the popular clique. Once in, however, they encountered new pressures to snub peers outside of the group to maintain their status. Thus, they found themselves trapped between pressures from their new group and pressures from their old friends. At the other end of the status hierarchy is Merten's (1996) 2-year ethnographic study of a group of rejected middle school boys, labeled *mels*. Merten cataloged the ways in which peers established the rejected status of these boys: assigning them to the mel crowd, teasing them, forcing them to sit at the front of the bus, and so on. He then followed the efforts of several boys to cope with their undesirable status, including the successful efforts of one boy to break

out of the mel crowd by so egregiously violating its norms (the behavior expected of mels) that peers were forced to reevaluate his crowd status. An important component of these "norm violations" was the boy's efforts to reshape his social network by ending relationships with fellow mels, cultivating friendships with students in the popular crowd, and joining formal groups (e.g., sports teams) that were atypical of mels.

Summary

Short-term and longitudinal ethnographic studies that track adolescents' efforts to mold peers' impression of self and respond to peer group norms and pressures come much closer to revealing the "give and take" in peer influence processes than studies based on other methodologies. Yet, self-report methodologies can be effective in charting the diversity of peer group norms and pressures that adolescents encounter and the variety of strategies they use to cope with or, perhaps, even shape these modes of peer influence. Of course, it is likely that peer influence operates at multiple levels. Most studies have focused on responses to pressures from close friends, but peer influences also emanate from the friendship group or clique, the crowd, and even the broader youth culture. Dynamics within formal peer groups (adult-sponsored youth groups, athletic teams, and so on) have routinely been ignored by investigators—even though these are ideal settings for participant observations. In short, there is much left to learn about how adolescents encounter, contribute to, and respond to influence processes in each of these segments of the peer environment.

Integrating Structure, Content, and Process

Investigators have explored a host of other factors in the adolescent peer environment beyond those illustrated previously. Moreover, some work intersects the three broad categories in which I have presented research. Both Eder (1985) and Eckert (1989) described how the features of friendships (content) differ among individuals in different peer crowds (structure). Feldman, Rosenthal, Brown, and Canning (1995) traced the different processes leading youngsters from different sociometric status groups (structure) into extensive sexual activity by middle adolescence. Berndt and Keefe (1995) examined the joint effects of the quality of friendships (content) and friends' efforts to support or undermine academic achievement (process) on adolescents' adjustment to school.

Nevertheless, the task of tying all this work together into a comprehensive portrait of the peer environment and its effects on adolescents seems overwhelming, as does the task of recommending which measurement strategies are most suitable for future work, or what lingering measurement problems are most important to resolve. To address these issues,

it first seems necessary to understand how the various strands of research fit within the peer environment as a whole and how this environment is connected to other major social contexts for adolescents. In the next section I present a conceptual framework for understanding the adolescent peer environment and then suggest how it may guide decisions about future work in this area.

RECONCEPTUALIZING THE PEER ENVIRONMENT

Researchers have been inclined to treat the peer environment as a unified entity, a simple microsystem (see Bronfenbrenner, chapter 1, this volume). Thus, there seems to be little concern about the specific facet of this environment that is tapped for measurement. Assessment of peer crowd norms, perceived pressures from the friendship group, and levels of similarity between friendship dyads are commonly viewed as equivalent operationalizations of peer influence. As is clear from the preceding discussion, the peer environment is actually a more complex social ecology, influenced by historical and developmental forces and embedded in other social contexts of teenagers' lives. What follows is a more comprehensive and differentiated conceptualization of the social ecology of adolescent peer relationships.

A Model of the Peer Environment

The peer environment is most commonly perceived as a network of dyadic and small-group relationships. At adolescence, it becomes more obviously *contextual* as well as relational. That is, in addition to continuing relationships with friends, activity mates, and classmates, peer contexts emerge in the form of interest groups, peer groups, or crowds—or at a more abstract level, the youth culture. To some extent these contexts are behavioral and observable: The drama club hangs out in the auditorium, gang members wear their hats a certain way, and so on. In other respects, they are more *cognitive* or phenomenological. Dunphy (1969), for example, found that adolescents readily used terms such as "surfie" and "rocker" but had difficulty articulating what differentiated the groups or determined membership. "It's not just the clothes they wear," one respondent said (Dunphy, 1969, p. 114), "it's personality—a surfie and a rocker are two different things. It's hard to say what it is." "The term surfie was an emotional one," Dunphy (1969, p. 114) explains, "Its value to the group lay in its very vagueness." A model of the peer environment must incorporate both the immediate, concrete relationships adolescents engage in as well as this more abstract, phenomenological level of peer associations and interactions.

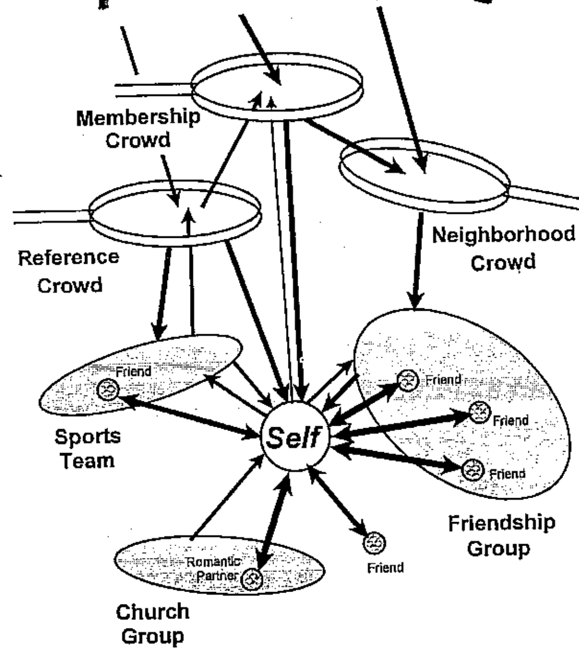

Figure 1. Conceptual model of the adolescent peer environment. Arrows indicate influence of one entity on another; thickness of arrow indicates magnitude of influence. Bent arrows indicate influence is filtered through intervening entity.

Figure 1 portrays this complex, multilevel peer ecology. Arrows represent influences between one component and another. The thickness of the arrow represents the degree of influence. Some arrows are bent to indicate that the influence of one entity on the individual is "filtered" through another entity.

Dyadic Relationships and Small-Group Interactions

At the heart of the peer ecology are an adolescent's one-on-one relationships with a close friend or romantic partner. These can be conceptualized as fully reciprocal because each partner has extensive input into the initiation, nurture, and dissolution of the relationship. Adolescents also exercise considerable influence over small-group relationships, mostly in their freedom to select or opt out of formal groups and friendship cliques.

Yet, teenagers have only limited control over such groups' memberships and activities because they are only one of many voices. Of course, an individual's level of influence on the group will depend on the person's status within the group (Adler & Adler, 1995; Savin-Williams, 1987); this model does not depict this individual variability very effectively.

The groups to which teenagers belong have their own pattern of relationships. A friendship clique may emerge from athletic teammates; one group of friends may share a strong antipathy toward another friendship group. Thus, one could easily conceive of each small group as a microsystem that manifests a constellation of goals and objectives operating norms, schedules of interactions, and temporal history and duration. Relations and interactions among the groups to which an adolescent belongs could be approached as a mesosystems analysis (Bronfenbrenner, 1986).

Crowd Contexts

At a higher level of abstraction are peer crowds. These are less concrete and interactional than microsystem peer groupings. Yet, like these groupings, they can be either formal (based on an individual's school, neighborhood, or community membership) or informal (reflecting an individual's abilities, interests, or belief systems). The crowd reflects an adolescent's reputation or image among peers. Though adolescents may endeavor earnestly to be affiliated with a particular crowd, or with none at all, to a great extent they are at the mercy of their neighborhood or ethnic origins or peers' opinions of them to determine the crowds with which they are associated (Eckert, 1989; Eder, 1985; Ianni, 1989; Schwendinger & Schwendinger, 1985). Thus, influence is much stronger from crowd to individual than from individual to crowd, although a crowd's influence may be buffeted by the interaction-based groups to which someone belongs. Crowds can also influence one another. One crowd may emulate the characteristics of a higher status crowd (J. S. Coleman, 1961; Eder, 1985). On the other hand, animosities can develop between crowds, such that members of one group consciously cultivate attitudes and activities that are precisely the opposite of identifying features of the other group (Dunphy, 1969; Eckert, 1989).

It is tempting to liken the crowd to Bronfenbrenner's (1986) description of an exosystem, but it does not meet the definition of this type of system because it quite clearly does include some of the individuals whom it affects. Instead, Bradley's (chapter 2, this volume) concept of the "ambience" of the family or Lawton's (chapter 4, this volume) discussion of "environmental mosaic" is applicable here. The crowd provides normative guideposts from which to interpret the attitudes and activities of self and others. In addition, the crowd provides some directives on attending to and interpreting messages from the broader youth culture. It is common

for adolescents to have a "split image" among peers—that is, to be associated with one crowd by some peers and with another crowd by others (Brown, 1992). Thus, they may be affected by the norm, values, and pressures of multiple groups—particularly in late adolescence as the barriers between groups begin to dissipate (Brown, Mory, & Kinney, 1994).

Youth Culture

An even more abstract layer of the peer environment, equivalent in many ways to Bronfenbrenner's (chapter 1, this volume) macrosystem, is the youth culture, which is the essential values and orientations of adolescents as a whole—the mood and message of a generation, if you will. Because change is an inherent feature of adolescence, macrosystems in the teenage peer environment are not nearly as permanent as their equivalent in the broader social ecology of the United States. Indeed, the evanescence of macrosystems reveals one facet of the final layer of the peer environment, the chronosystem (Bronfenbrenner, 1986), in which historical shifts in peer cultural norms or generational aspirations can be recorded. Individual time is also reflected in the chronosystem, in that one may observe developmental or maturational changes in the structure or function of the peer system.

In Figure 1, the influence of the youth culture on individuals is portrayed as indirect (through crowds and small groups) and unidirectional. Some, however, might argue that individuals can influence youth culture through their selection of specific media and music, their allegiance to particular rock performers, and so on (Arnett, 1995).

Historical and Developmental Forces

The intensity of friendships, the snobbishness and cliquishness of the popular crowd, and the evanescence of romantic attachments are all considered timeless features of adolescent peer relations. To be sure, some characteristics of the peer environment are replicated across generations. Yet, historical forces can shape this environment in important ways as well. Shifts in sexual mores will alter dating patterns and the course of romantic relationships. Efforts to desegregate schools will alter opportunities for and acceptance of cross-race friendships. Legislation to equalize extracurricular opportunities for the sexes will introduce new formal peer groups (e.g., women's sports teams). Peer crowds will appear and disappear in response to historically bound social movements: hippies give way to Valley girls; smokers are transformed into druggies and headbangers.

Because history cannot be anticipated, it is not feasible to work historical change into the design of most studies. Yet, there are several ways to explore historical effects on the peer environment. Some investigators

have taken advantage of archival data sets to assess the role of history in shaping adolescence (e.g., Elder, 1974). Others have replicated earlier studies to deduce how intervening historical events may have altered peer group norms or values (e.g., Eitzen, 1975); still others have seized on special opportunities to examine how ongoing historical circumstances may affect the dynamics of peer or cross-generational relationships (e.g., Keniston, 1968). Even when historical forces are not examined directly, investigators can acknowledge them indirectly by resisting bold generalizations about the applicability of their findings across time and place.

Studies have also revealed a number of significant developmental shifts in adolescents' orientations toward peers. With age, friendships are transformed into more stable and multiplex relationships (LaGaipa, 1979). There is also an increase across adolescence in levels of intimacy in peer relationships, especially with opposite-sex peers (Sharabany et al., 1981). The timing of this trend differs for boys and girls; it may also differ by social class or ethnicity, but such factors have not yet been studied. Conformity to peers seems to decline steadily (Costanzo & Shaw, 1966), whereas susceptibility to antisocial peer pressures follows an inverted U-shaped trajectory across childhood and adolescence (Berndt, 1979).

Perceptions of the dynamics of interaction in microsystems peer groups also change curvilinearily across adolescence. Gavin and Furman (1989) reported that, compared with early and late adolescents, individuals between 7th and 10th grade placed more importance on being popular, were more aware of a status hierarchy within their group, and found group interactions more negative in tone. On the other hand, conformity to group norms was perceived to diminish with age across adolescence, whereas group permeability (openness to outsiders) increased steadily. O'Brien and Bierman (1988) found linear developmental shifts in the basis for identifying or defining peer groups. With age, group descriptions based on overt behavior patterns diminished in favor of more frequent descriptions based on attitudes or group processes. In other words, older adolescents viewed peer groups in more abstract terms.

Such developmental patterns should prompt investigators to think carefully about age or stage in the sample selection process. Developmental status must also be considered routinely in data analyses and interpretations of results. The capacity of individuals to engage in successful impression management or influence of friends, cliques, and even crowds (the thickness of arrows from self to other entities in Figure 1) may change considerably across adolescence. Such changes have only begun to be charted.

Embeddedness

Researchers should not be so preoccupied with the multiple levels or layers of the peer environment that they lose sight of the fact that this environment is embedded in the broader social ecology of adolescents' lives. At all levels, the peer environment is affected by the other major social contexts or microsystems in which adolescents operate, most notably the family, school, neighborhood or community, and workplace. These contexts, in turn, are affected by the structure and dynamics of peer relationships. Like the peer environment, these other contexts are complex social systems with multiple levels and a variety of relationships. Mapping these contexts and their connections to various features of the peer context is an important task, but beyond the scope of this chapter. Yet, there is a wealth of research that has moved investigators in this direction. Sometimes the peer environment is conceptualized as a competitor with these other contexts for an adolescent's allegiance and orientation (Brittain, 1963). Sometimes it is seen as an outcome of the dynamics of family relationships (Brown et al., 1993; Eckert, 1989; Oetting & Beauvais, 1987; Patterson & Dishion, 1985) or of community norms or resources (McLaughlin, 1993; Peshkin, 1991). In other cases, peer relationships are regarded as primary forces shaping adolescents' experiences in other contexts, especially in school (J. S. Coleman, 1961; Fordham & Ogbu, 1986; Matute-Bianchi, 1986). These studies reflect the full array of conceptual and methodological challenges that have already been mentioned in this chapter.

Summary

Two important missions are accomplished by this conceptualization of the adolescent peer environment. First, it arranges the types of peer associations to which teenagers are routinely exposed into a hierarchy of levels, clarifying the interconnections between the types and their relationship to individual adolescents. Second, the model emphasizes the interactional nature of peer group influences, or what Stokols (1988; also see chapter 11, this volume) refers to as a *transactional* approach to the environment. Rather than viewing the environment and an individual's behavior as independent and dependent variables, respectively, this approach focuses on the enduring qualities of interdependence between people and settings. Human behavior is also assumed to be embedded in and markedly influenced by social contexts (in this case, friendship and formal peer groups as well as peer crowds, not to mention other contexts such as school and family to which the peer environment is closely related). An especially important feature of this approach is that relationships between people and environments are viewed as reciprocal rather than unidirectional, so that people shape environments as well as being shaped by them. Finally, person–environment relationships are to be viewed as dynamic (constantly changing) rather than as static.

To illustrate the advantages of this approach, let us reconsider Alisha and her friendship group. This approach not only acknowledges that Alisha

is the recipient of as well as contributor to peer pressures of the friendship group but also insists on seeing peer influence as reciprocal. The features of embeddedness and change encourage researchers also to attend to ways in which the friendship group as a whole is influenced or pressured by other facets of the peer ecology, by developmental and historical factors, and by other contexts that affect and are affected by the peer environment. Researchers are still free to study the friendship group's influence on Alisha, so long as they realize that they are examining only one part of a bidirectional, multifaceted influence process.

STUDYING THE PEER ENVIRONMENT: RECOMMENDATIONS AND CAUTIONS

Obviously, it is impossible to incorporate all of the levels and dynamics of the peer environment, let alone the connections to other social contexts, into a single study. Thus, Figure 1 should not be regarded as a blueprint for all future research in this area. It is more sensible to treat it as an overall "battle plan" that can help guide the selection of samples, methods, variables, and levels of analysis that underlie studies of specific issues related to peer influences on adolescents. In this final section of the chapter, I want to illustrate this approach with reference to two persistent issues that have preoccupied researchers of adolescent peer culture in the United States: the role of peers in teenage drug use and in academic achievement.

Peer Influences on Drug Use

There is extensive and consistent evidence that peers affect adolescent drug use, but efforts to specify peer influences have been remarkably diverse and, for the most part, fragmented. Researchers have operationalized peer influence by cataloging the drug-oriented messages in mass media consumed by teenagers, comparing drug usage of adolescents in different peer crowds (Dolcini & Adler, 1994; Mosbach & Leventhal, 1988), determining the strength of an adolescent's association with drug-using peer groups (Oetting & Beauvais, 1987), ascertaining drug use patterns or attitudes of close friends (Kandel & Andrews, 1987), assessing adolescents' "peer orientation" (Condry & Simon, 1974), examining adolescents' perceptions of peer pressure to use drugs (Clasen & Brown, 1985), and many other ways. Are these all equally valid and appropriate measures of peer influence? If so, is it appropriate to aggregate these measures into a superordinate indicator?

The conceptual model presented in this chapter (Figure 1) suggests that the various levels of the peer environment, which could be regarded

as multiple sources of influence, do not have equal and direct paths of influence on the individual nor are they equally vulnerable to reciprocal influences from the adolescent. This undermines the sensibility of a simple, additive composite measure. Kandel and Andrews (1987) drew interesting distinctions between three different processes of peer influence: normative influence, modeling, and direct pressure. To take these distinctions a step further, investigators should carefully consider the type of influence that predominates in each level or type of relationship within the peer environment. Normative influence is most likely to be manifest in peer crowds or, at a more distant level, in youth culture. Modeling should be especially apparent in interaction-based groups (friendship cliques, clubs, sports teams, etc.). Direct pressure should be strongest in a dyadic relationship but is probably strong in friendship cliques as well. The task, then, is to design suitable measures of each process within the appropriate level or type of peer relationship. Preferred measurement strategies are likely to arise from this Process × Level interaction. For example, modeling in interaction-based groups is more reliably measured by ethnographic or participant observation approaches than by self-report. Crowd norms, on the other hand, are experienced more phenomenologically than behaviorally. That is, they are most powerful in terms of what adolescents perceive them to be rather than what they really are among crowd members; thus, a self-report measure of perceptions of crowd norms should be more telling than participant observation data or information from each crowd member.

The thicker the arrow leading from self to another facet of the peer environment in Figure 1, the more pressing is the need to examine reciprocal influences. Laboratory studies of interaction processes (e.g., Dishion et al., 1995) or analyses of self-report data from both members of a dyadic relationship are effective alternatives to self-report data on friends' influence. Assessments of an individual's influence on the group (e.g., Savin-Williams, 1987) or consideration of the personal salience of groups to which an adolescent belongs can become moderating variables in analyses of interaction group influences on adolescent drug use. Studies that consider both crowd and interaction group affiliations can explore the filtering process that affects peer influence and the higher levels of the peer environment.

It is very difficult to measure multiple processes of influence across variable levels of the peer environment. How does one choose the most appropriate level to investigate? The conceptual model provides no clear answer to this question. Rather, as a battle plan, it condones different studies of different levels, so long as measurement strategies are suitable to the nature of peer influence at each level in question, and so long as there is an effort to build these studies into a comprehensive corpus of findings.

Studies that do examine multiple levels are potentially quite insightful. Urberg (1992), for example, gathered data on students' crowd affiliation

and drug usage in their friendship network to determine which of these two were more strongly predictive of the adolescents' own drug use patterns. Variables based on friends' use were significant predictors of individual drug use; crowd affiliation was not a factor. This is consistent with the conceptual model, which suggests that crowd influences will be filtered through friendship networks. Yet, significant crowd influences may have been masked in this study by the way in which crowd and friend influences were conceptualized. By contrast, Huang (1992) considered crowds as contexts in which the process (more specifically, the magnitude) of friend influence might differ. Adolescents grouped by peer-rated crowd affiliation were compared for the degree to which drug use levels reported by close friends were associated with the adolescents' own use and short-term changes in use. In this study, friends' level of drug use was a strong predictor of drug use among populars, brains, normals, and the Hispanic crowd but not among druggies or nerds.

In addition to improperly equating peer variables across different levels of the peer environment, there is the problem of ignoring salient peer variables within levels. Studies of peer group influences on adolescent drug use concentrate almost exclusively on the friendship group. Admittedly, this is likely to be the most influential interaction-level peer group, and the most expedient to measure, because virtually all adolescents can identify one. Still, interesting dynamics are overlooked by failing to inquire about other groups to which the teenager belongs: church or community youth groups, school- or community-sponsored extracurricular activities, and so on. Gathering data on these diverse groups should provide a more adequate measure of peer influence (modeling, direct pressure, or whatever). It may be desirable to create an aggregate score from measures of influence in these various groups, although investigators should consider weighting the scores from each group by the adolescents' psychological or temporal investment in the group. As I have already said, such a weighting scheme would show sensitivity to the reciprocity of influence; in this case, the notion is that peer groups will influence the teenager most strongly when she or he is clearly committed to the group.

Peer Influences on Academic Achievement

In recent years, educators and scholars have been dismayed by the low performance of American adolescents, in comparison to their counterparts in other industrialized nations, on measures of academic effort, interest, and achievement (Tomlinson, 1993). Several continue the decades-old tradition (J. S. Coleman, 1961) of placing much of the blame on peers, but others emphasize the potential of other social contexts—especially family and workplace—to contribute to adolescents' low academic commitment. Which of these environments is most to blame—or

more generally, how does each setting contribute to student achievement? Answers to this question require comparisons of the peer environment to other social contexts. In other words, in addition to intracontextual analyses addressed in the previous section, there are important research questions that call for intercontextual assessments.

The conceptual model implies that peer influences may intersect with family or work or school or community influences at a number of different levels. The school structure may influence the peer group structure, as when school tracking systems crystallize normative differences among crowds and obstruct intercrowd interaction (Ball, 1981; Schwartz, 1981): The brains, who are defined in part by their steady diet of advanced placement courses, may rarely encounter druggies or hoods, who populate remedial track courses. Parent–child interaction seems to provide a model that is replicated in features of peer friendships (Cooper, Carlson, Keller, Kock, & Spradling, 1991). Community norms can fuel or diffuse enmities that are likely to arise among ethnically based peer crowds (Ianni, 1989; Peshkin, 1991). How does one determine the appropriate variables to draw from each context for these comparisons? Although each of these social contexts is a rich and complex environment, these contexts are not likely to share the same arrangement of components, as is stipulated in Figure 1. Contexts are more likely, however, to share the differentiation among structure, content, and process that was articulated for the peer environment earlier in this chapter. By comparing variables in the same category across environments (e.g., family structure vs. peer group structure), investigators can minimize the "method error" that often accompanies studies that draw variables from different facets of each environment. Comparisons of conflict management styles in parent–adolescent and adolescent–friend relationships provide a good illustration of this approach (Laursen, 1993; Youniss & Smollar, 1985).

Interestingly, the direction of peer influence, as well as the capacity of peers to override or undermine family influences on school achievement, is not consistent across ethnic groups (Steinberg, Dornbusch, & Brown, 1992). Certainly, it is important to continue the trend toward drawing samples that are diverse or "unusual" (i.e., not primarily European American) in ethnic composition. More specifically, however, investigators should strive for more programmatic sampling. That might involve sampling on a series of key individual difference variables thought to affect peer relations. Matute-Bianchi's (1986) examination of differences in peer norms among immigrant, first-generation, and second-generation Mexican/Mexican American adolescents could be viewed as the first step in such a research program. Or programmatic sampling could involve assessments of peer environments in a series of clearly specifiable social contexts, such as Ianni's (1989) comparison of peer relationships in urban and suburban communities. The general objective is to select a succession of samples

that permit careful, programmatic analyses of specific components of the general conceptual model of the peer environment. This should help refocus researchers' understanding of the adolescent peer environment on a contextually based rather than on a generic or Eurocentric model.

In a similar fashion, investigators need to be attentive to the settings from which their samples are drawn. J. S. Coleman (1961), for example, demonstrated that community orientations toward education clearly affected the salience of academic achievement as a criterion of peer status in different high schools. Samples drawn from a single school or community should carefully examine how that context shapes (or is shaped by) the specifics of the peer environment. Multiple-school or multiple-community studies should be guided by efforts to sample identifiably different contexts rather than simply to increase sample size.

Even within a school or community, setting is an important consideration. Ratings of sociometric status made by peers in an advanced physics class are unlikely to be the same as ratings in a health class taken by a broader cross-section of classmates. Confining analyses of friends to school classmates—though expedient for locating and gathering data from friends of respondents—may seriously misrepresent characteristics of a teenager's actual friendship group, especially among urban minority adolescents (DuBois & Hirsch, 1990).

The most insightful intercontextual (as well as intracontextual) analyses involving the peer environment are likely to be those that incorporate variables across the domains of structure, content, and process of relationships. For such work, Bronfenbrenner's process–person–context–time model (see Bronfenbrenner, chapter 1, this volume) may be an especially effective organizational scheme. Steinberg et al. (1992) speculated that parenting styles (process) do not seem to have the same effect on achievement outcomes of adolescents from various ethnic groups (person) because adolescents in these ethnic groups do not have equal access to peer crowds (context) that reinforce or undermine school achievement. Of course, access to peer crowds is likely to vary across adolescence (developmental time) and be influenced by historical circumstances such as the acceptability of segregated schools and communities (historical time). Thus, it is easy to transform and expand Steinberg et al.'s speculations into the PPCT formulation.

Bronfenbrenner's (chapter 1, this volume) approach provides a sensible strategy for a coordinated set of analyses that systematically assesses the major components of the peer environment that I have identified: structure, content, and process of peer relations that change developmentally, are embedded in historical context, and are related to social contexts of adolescents' lives. Although it lends itself to linear, cause–effect (rather than to reciprocal effects) analyses, this approach can help investigators

design studies to capture the multifaceted nature of the adolescent peer environment.

CONCLUSION

Wachs (1992) noted that although it is common to speak about and measure environmental influences as if they were direct, they are often indirect. The effects of one environmental factor will be contingent on another environmental factor and will be further moderated by individual variables. In this chapter I have offered a conceptual scheme that acknowledges the multidimensionality of the peer environment; its embeddedness in other social environments; and its capacity to affect and be affected by individual, developmental, and historical factors. Although this makes measurement of the peer environment more complex, it provides a mechanism for dealing with that complexity in a sensible and systematic fashion. Researchers appear to be ready to move beyond simple cause–effect models to more interactional approaches of multiple contingencies. Measures and measurement strategies must proceed in the same direction. Only then can researchers hope to appreciate the intriguing intricacies of the peer environment at this stage of the life cycle.

REFERENCES

Adler, P. A., & Adler, P. (1995). Dynamics of inclusion and exclusion in preadolescent cliques. *Social Psychology Quarterly, 58*, 145–162.

Arnett, J. J. (1995). Adolescents' use of media for self-socialization. *Journal of Youth and Adolescence, 24*, 519–533.

Ball, S. J. (1981). *Beachside comprehensive*. Cambridge, England: Cambridge University Press.

Berndt, T. J. (1979). Developmental changes in conformity to peers and parents. *Developmental Psychology, 15*, 606–616.

Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development, 66*, 1312–1329.

Berndt, T. J., & Perry, T. B. (1986). Children's perceptions of friendships as supportive relationships. *Developmental Psychology, 22*, 640–648.

Brittain, C. V. (1963). Adolescent choices and parent–peer cross-pressures. *American Sociological Review, 28*, 385–391.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723–742.

Brown, B. B. (1990). Peer groups and peer cultures. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 171–196). Cambridge, MA: Harvard University Press.

Brown, B. B. (1992). The measurement and meaning of adolescent peer groups. *SRA (Society for Research on Adolescent) Newsletter*, *6*(1), 6–8.

Brown, B. B., Clasen, D. R., & Eicher, S. A. (1986). Perceptions of peer pressure, peer conformity dispositions, and self-reported behavior among adolescents. *Developmental Psychology*, *22*, 521–530.

Brown, B. B., Dolcini, M. M., & Leventhal, A. (1997). Transformations in peer relationships at adolescence: Implications for health-related behavior. In J. Schulenberg, J. L. Maggs, & K. Hurrelmann (Eds.), *Health risks and developmental transitions during adolescence* (pp. 161–189). Cambridge, England: Cambridge University Press.

Brown, B. B., Eicher, S. A., & Petrie, S. (1986). The importance of peer group ("crowd") affiliation in adolescence. *Journal of Adolescence*, *9*, 73–96.

Brown, B. B., Freeman, H., Huang, B. H., & Mounts, N. S. (1992, March). *"Crowd hopping": Incidents, correlates, and consequences of change in crowd affiliation during adolescence*. Paper presented at the biennial meeting of the Society for Research in Adolescence, Washington, DC.

Brown, B. B., Lamborn, S. L., Mounts, N. S., & Steinberg, L. (1993). Parenting practices and peer group affiliation in adolescence. *Child Development*, *64*, 467–482.

Brown, B. B., Mory, M., & Kinney, D. A. (1994). Casting adolescent crowds in relational perspective: Caricature, channel, and context. In R. Montemayor, G. R. Adams, & T. P. Gullotta (Eds.), *Advances in adolescent development: Vol. 6, Personal relationships during adolescence* (pp. 123–167). Newbury Park, CA: Sage.

Buff, S. A. (1970). Greasers, dupers, and hippies: Three responses to the adult world. In L. Howe (Ed.), *The white majority* (pp. 60–77). New York: Random House.

Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development*, *61*, 1101–1111.

Bukowski, W. M., Newcomb, A. F., & Hoza, B. (1987). Friendship conceptions among early adolescents: A longitudinal study of stability and change. *Journal of Early Adolescence*, *7*, 143–152.

Cairns, R. B., Leung, B.-C., Buchanan, L., & Cairns, B. D. (1995). Friendships and social networks in childhood and adolescence: Fluidity, reliability, and interrelations. *Child Development*, *66*, 1330–1345.

Cairns, R. B., Perrin, J. E., & Cairns, B. D. (1985). Social structure and social cognition in early adolescence: Affiliative patterns. *Journal of Early Adolescence*, *5*, 339–355.

Clasen, D. R., & Brown, B. B. (1985). The multidimensionality of peer pressure in adolescence. *Journal of Youth and Adolescence*, *14*, 451–468.

Cohen, J. (1976). The impact of the leading crowd on high school change: A reassessment. *Adolescence*, *11*, 373–381.

Coleman, J. C. (1974). *Relationships in adolescence*. Boston: Routledge and Kegan Paul.

Coleman, J. S. (1961). *The adolescent society*. New York: Free Press.

Condry, J., & Simon, M. L. (1974). Characteristics of peer- and parent-oriented children. *Journal of Marriage and the Family*, *36*, 543–554.

Cooper, C. R., Carlson, C. I., Keller, J., Kock, P., & Spradling, V. (1991, April). Conflict negotiation in early adolescence: Links between family and peer relational patterns. In B. B. Brown (Chair), *From family to peer: Family influences on peer relations from early childhood through adolescence*. Symposium conducted at the biennial meetings of the Society for Research in Child Development, Seattle, WA.

Costanzo, P. R., & Shaw, M. E. (1966). Conformity as a function of age level. *Child Development*, *37*, 967–975.

Csikszentmihalyi, M., & Larson, R. (1984). *Being adolescent*. New York: Basic Books.

Cusick, P. A. (1973). *Inside high school*. New York: Holt, Rinehart & Winston.

Deyhle, D. (1986). Break dancing and breaking out: Anglos, Utes, and Navajos in a border reservation high school. *Anthropology and Education Quarterly*, *17*, 111–127.

Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Antisocial boys and their friends in early adolescence: Relationship characteristics, quality, and interactional process. *Child Development*, *66*, 139–151.

Dolcini, M. M., & Adler, N. E. (1994). Perceived competencies, peer group affiliation, and risk behavior among early adolescents. *Health Psychology*, *13*, 496–506.

DuBois, D. I., & Hirsch, B. J. (1990). School and neighborhood friendship patterns of blacks and whites in early adolescence. *Child Development*, *61*, 524–536

Dunphy, D. C. (1969). *Cliques, crowds, and gangs*. Melbourne, Australia: Chesire.

Eckert, P. (1989). *Jocks and burnouts: Social categories and identity in the high school*. New York: Teachers College Press.

Eder, D. (1985). The cycle of popularity: Interpersonal relations among female adolescence. *Sociology of Education*, *58*, 154–165.

Eitzen, D. S. (1975). Athletics in the status system of male adolescents: A replication of Coleman's *The adolescent society*. *Adolescence*, *10*, 267–276.

Elder, G. H. (1974). *Children of the Great Depression*. Chicago: University of Chicago Press.

Ennett, S. T., & Bauman, K. E. (1993). Peer group structure and adolescent cigarette smoking: A social network analysis. *Journal of Health and Social Behavior*, *34*, 226–236.

Erikson, E. H. (1968). *Identity, youth, and crisis*. New York: Norton.

Feinstein, S. C., & Ardon, M. S. (1973). Trends in dating patterns and adolescent development. *Journal of Youth and Adolescence*, *2*, 157–166.

Feldman, S. S., Rosenthal, D. R., Brown, N. L., & Canning, R. D. (1995). Pre-

dicting sexual experience in adolescent boys from peer rejection and acceptance during childhood. *Journal of Research in Adolescence, 5*, 387–411.

Feueur, L. S. (1969). *Conflict of generations*. New York: Basic Books.

Fisher, L. A., & Bauman, K. E. (1988). Influence and selection in the friend–adolescent relationship: Findings from studies of adolescent smoking and drinking. *Journal of Applied Social Psychology, 18*, 289–314.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the burden of "acting white." *Urban Review, 18*, 176–206.

Freud, A. (1958). Adolescence. *Psychoanalytic Study of the Child, 13*, 255–278.

Gavin, L. A., & Furman, W. (1989). Age differences in adolescents' perceptions of their peer groups. *Developmental Psychology, 25*, 827–834.

Hamm, J. V. (1993, March). *African-American, Asian-American, and Hispanic-American adolescents' perceived crowd affiliations in multi-ethnic high schools*. Paper presented at the biennial meetings of the Society for Research in Child Development, New Orleans, LA.

Hendrick, S., & Hendrick, C. (1994, February). *Gender, sexuality, and close relationships*. Paper presented at the biennial meetings of the Society for Research in Adolescence, San Diego, CA.

Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.

Hogue, A., & Steinberg, L. (1995). Homophily of internalized distress in adolescent peer groups. *Developmental Psychology, 31*, 897–906.

Huang, B. H. (1992, March). *Parent and peer influences on adolescent deviance revisited: Impact of crowd affiliation*. Paper presented at the biennial meetings of the Society for Research in Adolescence, Washington, DC.

Ianni, F. A. J. (1989). *The search for structure*. New York: Free Press.

Juvonen, J., & Murdock, T. B. (1995). Grade-level differences in the social value of effort: Implications for self-presentation tactics of early adolescents. *Child Development, 66*, 1694–1705.

Kandel, D. B. (1978). Homophily, selection, and socialization. *American Journal of Sociology, 84*, 427–438.

Kandel, D. B., & Andrews, K. (1987). Processes of adolescent socialization by parents and peers. *International Journal of the Addictions, 22*, 319–342.

Keniston, K. (1968). *Young radicals*. New York: Harcourt, Brace, and World.

Kinney, D. A. (1993). From "nerds" to "normals": Adolescent identity recovery within a changing social system. *Sociology of Education, 66*, 21–40.

Kinney, D. A. (1995, April). From at-risk to resilient: Examining the role of extracurricular activities for urban high school students. In D. Mekos & G. H. Elder, Jr. (Chairs), *Developmental perspectives on adolescent extracurricular involvement*. Symposium conducted at the biennial meetings of the Society for Research in Child Development, Indianapolis, IN.

LaGaipa, J. J. (1979). A developmental study of the meaning of friendship in adolescence. *Journal of Adolescence, 2*, 201–213.

Larkin, R. W. (1979). *Suburban youth in cultural crisis*. New York: Oxford University Press.

Laursen, B. (1993). The perceived impact of conflict on adolescent relationships. *Merrill-Palmer Quarterly, 39*, 535–550.

Lesko, N. (1988). *Symbolizing society: Stories, rites, and structure in a Catholic high school*. Philadelphia: Falmer Press.

Matute-Bianchi, M. E. (1986). Ethnic identities and patterns of school success and failure among Mexican-Descent and Japanese-American students in a California high school: An ethnographic analysis. *American Journal of Education, 95*, 233–255.

McLaughlin, M. W. (1993). Embedded identities. In S. B. Heath & M. W. McLaughlin (Eds.), *Identity and inner city youth: Beyond ethnicity and gender* (pp. 36–68). New York: Teachers College Press.

Merten, D. (1996). Vulnerability and visibility: Responses to a stigmatized identity. *Journal of Early Adolescence, 16*, 5–26.

Mosbach, P., & Leventhal, H. (1988). Peer group identification and smoking: Implications for intervention. *Journal of Abnormal Psychology, 97*, 238–245.

O'Brien, S. F., & Bierman, K. L. (1988). Conceptions and perceived influence of peer groups: Interviews with preadolescents and adolescents. *Child Development, 59*, 1360–1365.

Oetting, E. R., & Beauvais, F. (1987). Peer cluster theory, socialization theory, and adolescent drug use: A path analysis. *Journal of Counseling Psychology, 34*, 205–213.

Patterson, G. R., & Dishion, T. J. (1985). Contributions of families and peers to delinquency. *Criminology, 23*, 63–79.

Peshkin, A. (1991). *The color of strangers, the color of friends*. Chicago: University of Chicago Press.

Petersen, A. C. (1993). Creating adolescents: The role of context and process in developmental trajectories. *Journal of Research on Adolescence, 3*, 1–18.

Piaget, J. (1958). *The growth in logical thinking from childhood to adolescence*. New York: Basic Books.

Roe, K. (1992). Different destinies, different melodies: School achievement, anticipated status, and adolescents' taste in music. *European Journal of Communication, 7*, 335–357.

Savin-Williams, R. C. (1987). *Adolescence: An ethological perspective*. New York: Springer-Verlag.

Savin-Williams, R. C. (1994). Dating those you can't love and loving those you can't date. In R. Montemayor, G. R. Adams, & T. P. Gullatta (Eds.), *Advances in adolescent development: Vol. 6. Personal relationships during adolescence* (pp. 168–195). Thousand Oaks, CA: Sage.

Sebald, H. (1981). Adolescents' concept of popularity and unpopularity: Comparing 1960 with 1976. *Adolescence, 16*, 187–193.

Scarr, S. (1992). Developmental theories for the 1990's: Development and individual differences. *Child Development*, *63*, 1–19.

Schwartz, F. (1981). Supporting or subverting learning?: Peer group patterns in four tracked high schools. *Anthropology and Education Quarterly*, *12*, 99–121.

Schwendinger, H., & Schwendinger, J. S. (1985). *Adolescent subcultures and delinquency*. New York: Praeger.

Sharabany, R., Gershoni, R., & Hofman, J. (1981). Girlfriend, boyfriend: Age and sex differences in intimate friendship. *Developmental Psychology*, *17*, 800–808.

Shrum, W., & Cheek, N. H. (1986). Social structure during the school years: Onset of the degrouping process. *American Sociological Review*, *52*, 218–223.

Shulman, S. (1993). Close friends in early and middle adolescence: Typology and friendship reasoning. In B. Laursen (Ed.), *Close friendships in adolescence* (pp. 55–71). San Francisco: Jossey-Bass.

Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 255–276). Cambridge, MA: Harvard University Press.

Steinberg, L., Dornbusch, S. M., & Brown, B. B. (1992). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, *47*, 723–729.

Stokols, D. (1988). Transformational processes in people–environment relations. In J. E. McGrath (Ed.), *The social psychology of time: New perspectives* (pp. 233–252). Newbury Park, CA: Sage.

Tanner, J. M. (1972). Sequence, tempo, and individual variation in growth and development of boys and girls aged twelve to sixteen. In J. Kagan & R. Coles (Eds.), *Twelve to sixteen: Early adolescence* (pp. 1–24). New York: Norton.

Thomas, J. W. (1993). Expectations and effort: Course demands, students's study practices, and academic achievement. In T. M. Tomlinson (Ed.), *Motivating students to learn* (pp. 139–176). Berkeley, CA: McCutchan.

Tomlinson, T. M. (Ed.). (1993). *Motivating students to learn*. Berkeley, CA: McCutchan.

Urberg, K. A. (1992). Locus of peer influence: Social crowd and best friend. *Journal of Youth and Adolescence*, *21*, 439–450.

Wachs, T. D. (1992). *The nature of nurture*. Newbury Park, CA: Sage.

Walker, J. C. (1988). *Louts and legends: Male youth culture in an inner-city school*. Concord, MA: Allen & Unwin.

Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends*. Chicago: University of Chicago Press.

Zisman, P., & Wilson, V. (1992). Table hopping in the cafeteria: An exploration of "racial" integration in early adolescent social groups. *Anthropology and Education Quarterly*, *23*, 199–220.

4

ENVIRONMENTAL TAXONOMY: GENERALIZATIONS FROM RESEARCH WITH OLDER ADULTS

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Much of the research in person–environment relations has been performed in contexts that are very user specific, such as mental hospitals; residences for mentally impaired individuals; schools; offices; and various settings for children, adolescents, and the aged. Theory in person–environment relations has been, as it should be, less user-group bound. Although in this chapter I deal with the particular perspective of older people, wherever possible, application to all user groups is sought in the discussion of concepts and measures. I make the assertion that generic structures for assessment can be identified. I then argue that the technology of environmental assessment can be improved in a way that utilizes universal dimensions but is still flexible enough to allow instrument versions or modules for user-specific content. Another view of environmental assessment issues in gerontology may be found in Carp (1994).

This presentation begins with a brief depiction of the ecological model (Lawton & Nahemow, 1973), in which I attempt to specify some concepts in the person–environment transaction. These concepts require further differentiation and operationalization. Several strategies for envi-