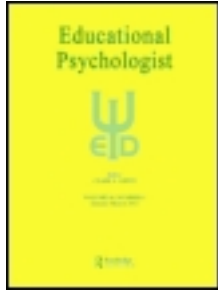


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# Peer Groups as a Context for the Socialization of Adolescents' Motivation, Engagement, and Achievement in School

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Examining the extent, nature, and scope of peer group influence on academic outcomes is an important direction for future research to enrich our understanding of adolescent motivation, engagement, and achievement. Conceptual and methodological issues involved in studying peer groups are discussed. Existing research that addresses the influence of peer groups on academic outcomes is reviewed. Processes of how peer groups socialize achievement beliefs and behaviors are considered. Promising directions for future research are discussed.

The changes, challenges, and opportunities that characterize the passage from childhood into adolescence are many. This stage of life is replete with physical, cognitive, school, and social changes. Amidst these complex changes, adolescents must make decisions about their commitment to academics. Is school important to me? Does it matter to me if I get good grades? Does it matter to me if I learn at school? Am I someone who puts effort into schoolwork? Am I someone who has the ability to succeed in school? As most opportunities in contemporary society are linked to success in school, the answers to such questions about motivation, engagement, and achievement have far-reaching consequences and in many ways establish adolescents' life trajectories (Carnegie Council on Adolescent Development, 1989, 1995; Dryfoos, 1990; Fine, 1991).

The choices that adolescents make regarding their motivation, engagement, and achievement in school and the satisfaction they derive from their choices depends, in part, on the context in which they make such choices. Teachers, parents, and peers provide adolescents with suggestions and options of ways to think about and to engage in school, and their reactions and evaluations serve to affirm, sustain, or change adolescents' motivation and engagement. In general, researchers have focused more on teachers and parents than peers as socializing agents of motivation and engagement (see Eccles, Wigfield, & Schiefele, 1998). However, schools and classrooms are inherently social places, and it seems likely that the peer group is an important influence on adolescent achieve-

ments, beliefs, and behaviors. An exploration of how the peer group context influences<sup>1</sup> adolescent motivation, engagement, and achievement in school represents an important direction for enriching our understanding in this area.

It is widely acknowledged that experiences with peers constitute an important developmental context for children and adolescents (Berndt, 1992; Brown, 1990; Hartup, 1996; Parker & Asher, 1987). Children's experiences with peers occur on several different levels: general interactions, relationships, and groups (Rubin, Bukowski, & Parker, 1998). Investigations regarding children's general interactions and relationships with their peers concern their social competence and popularity and are conceptually distinct from experiences in peer groups. Investigations of the concept of popularity with peers have dominated peer research over the last 15 years (Rubin et al., 1998). Although widely acknowledged as important, how peer groups influence child and adolescent development has received less attention (Kindermann, McCollam, & Gibson, 1996; Magnussen & Statin, 1998; Rubin et al., 1998).

The purpose of this article is to examine the role that peer groups play in the socialization of adolescent motivation, engagement, and achievement in school. The three main goals of this article are organized accordingly. First, as a foundation for my discussion, I provide definitions for the terms *motivation*, *engagement*, and *achievement* used throughout the article and I briefly comment on key methodological issues involved in the research concerning peer groups. Second, I discuss research that addresses the following questions: Do

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<sup>1</sup>The terms *influence* and *socialization* are used interchangeably throughout the article.

peer groups influence the development of motivation, engagement, and achievement, and what is the nature of this influence? I briefly consider work that shows similarity among peer groups and then discuss in greater detail the few studies that have examined the socialization of motivation, engagement, and achievement within peer groups. I consider two dimensions, initial similarity and personal value, that likely affect the nature of the socialization processes within the peer group and consider implications for motivation, engagement, and achievement. Third, I discuss research that addresses the following question: How do peer groups influence an adolescent? In the following section, I discuss three processes that are likely to be important to understanding socialization in the peer group context: information exchange, modeling, and reinforcement of peer norms and values. I briefly note some possible moderators of peer group influence before I conclude. Throughout, I note directions for future research that may enhance our understanding of how the peer group serves as a context for the socialization of motivation, engagement, and achievement.

#### DEFINITIONS OF MOTIVATION, ENGAGEMENT, AND ACHIEVEMENT

Most contemporary views of motivation emphasize individuals' cognition (Eccles et al., 1998; Pintrich & Schunk, 1996). In general, the cognitions emphasized in current motivational theories concern two general questions: Can I do my schoolwork (e.g., attributions, self-efficacy beliefs, expectancy beliefs)? and Do I want to do my schoolwork and why (e.g., value, mastery and performance goals, intrinsic and extrinsic motivation; Eccles et al.)? Such cognitions have a powerful effect on engagement and achievement (see Eccles et al.; Pintrich & Schunk). The term *engagement* is used in this article to refer to overt behaviors that can be observed in students, such as effort and persistence on schoolwork, participation in classes, and time on homework. Thus, the distinction between motivation and engagement is between student cognition underlying involvement in schoolwork (i.e., beliefs) and actual involvement in schoolwork (i.e., behavior). *Achievement* is used in this article to refer to performance outcomes such as grades on report cards and scores on standardized achievement tests.

Distinguishing motivation from engagement and achievement is important because the small amount of empirical work in the area of peer socialization and academic outcomes has almost exclusively focused on engagement and achievement (e.g., Berndt & Keefe, 1995; Epstein, 1983; Kindermann, 1993). Although we know little about how the peer group serves as a context for the socialization of engagement and achievement, we know even less regarding motivation. However, there is a large literature that identifies such motivational beliefs as critical in understanding students' academic outcomes (e.g., Ames, 1992; Eccles et al., 1998;

Weiner, 1990). To appreciate the role of the peer group context regarding the socialization of academic outcomes, we need to investigate motivational constructs as well as engagement and achievement.

#### METHODOLOGICAL ISSUES IN THE STUDY OF PEER GROUPS

The neglect of research on peer groups in general and academic outcomes in particular is likely due to complex conceptual and methodological issues involved in studying peer groups (Rubin et al., 1998). Extant research on socialization within peer groups is characterized by several conceptual and methodological difficulties that make our knowledge of socialization processes incomplete. Next, I briefly review four conceptual and methodological issues that are important for appreciation of the current state of knowledge regarding socialization in the peer group context.

##### Similarity: Selection or Socialization?

Early work designed to assess socialization in the peer group context generally employed correlational techniques that examined the relations between students and their self-identified friends on a given characteristic (see Ide, Parkerson, Haertel, & Walberg, 1981, for a review). Moderate to high correlations were taken as evidence of peer group influence. Such research has documented that adolescent peer groups exhibit similarity on many characteristics and attributes. However, documenting similarity regarding various characteristics is not necessarily evidence for peer influence. It could be that adolescents select friends who are similar to them to begin with. As much of the research examining similarities among friends has been measured at one point in time, it therefore cannot elucidate the processes at work behind the documented similarity (as noted in reviews by Berndt, 1992; Epstein, 1983; Hartup, 1993). To distinguish between selection and socialization processes, recent research has predominantly relied on short-term longitudinal designs to predict changes in student outcomes (i.e., Time 1–Time 2) based on initial peer group characteristics (i.e., Time 1).

##### Measurement of Peer Groups

Much of the work concerning peer influence has lacked conceptual clarity, in part due to varied usage of terminology. Brown (1990) noted that the term *peer group* has been applied to everything from interaction with a best friend to an individual's tie with his or her entire age cohort. The term *peer group* is used to refer to an individual's small, relatively intimate group of peers who interact on a regular basis (often referred to as a *clique*; Brown, 1990; Rubin et al., 1998). Defined as such, most studies of peer influence have not examined peer groups. Research has examined peer influence in the context

of best friend pairs (e.g., Kandel, 1978) or crowds of adolescents (e.g., Brown, Clasen, & Eicher, 1986). However, peer groups typically encompass more than best friends and are distinct from *crowds*. The term *crowd* refers to large collectives of similarly stereotyped individuals who are grouped together because of reputation-based traits, not because they spend time together (e.g., “jocks,” “brains,” and “druggies”). Another way researchers have investigated peer groups is to use students’ self-nominated friends; this technique typically consists of a list of students’ three closest friends (e.g., Berndt & Keefe, 1995; Epstein, 1983). However, this arbitrarily restricts the number of friends in an individual’s peer group. Furthermore, when the number of friends is specified, adolescents with fewer than three friends may feel compelled to include the names of other students who are not actually their close friends (Hallinan, 1981; Rubin et al., 1998). In general, peer groups or cliques have 2 to 12 members, with an average of 5 or 6 (Ennett & Bauman, 1994; Urberg, Degirmencioglu, & Pilgrim, 1997). The nature and extent of differences regarding various types and measurement of peer relationships (i.e., best friends, three friends, peer groups, crowds) and the socialization of academic outcomes has not been examined.

### Perceived Versus Actual Reports

Many studies of peer group influence on adolescents’ behavior have measured peer group characteristics by using adolescents’ perceptions of their friends’ behavior (i.e., perceived reports) rather than asking the friends to report on their own behaviors (i.e., actual reports). This strategy is undermined by studies showing that perceived reports are not necessarily accurate and may consist of individuals’ projections of their own values onto others. In general, adolescents overestimate how similar they are to their friends (Bauman & Ennett, 1996; Berndt & Keefe, 1995; Davies & Kandel, 1981). Thus, by using perceived reports, studies generate inflated correlations between respondents’ and friends’ behavior. However, the use of perceived reports is often justified by the reasoning that what adolescents think their friends do is more influential than what the friends actually do. Perception is vital to influence, and it may be the subjective (albeit less accurate) report that is key to understanding influence. This line of reasoning assigns the cause of adolescent behavior to the adolescent perceptions and not to peer group characteristics (Bauman & Ennett). Both perceived and actual reports are informative, but they target different processes regarding peer group influence. Distinctions and possible connections between the different processes have not been made clear.

### Level of Analysis

Extant research has generally not distinguished shared versus nonshared experiences in the peer group context. However, this is likely to be an important consideration. At some level

there is likely to be a common or shared experience in the peer group regarding norms, values, and standards that concern motivation and achievement in school. That is, there is a climate or context that emerges out of interactions and experiences among peer group members and affects each individual in the peer group. However, there are also likely to be individual differences in how the peer group context is experienced. This may be due to unique interactions that an individual has with another member (i.e., not all members are present and involved in all interactions), unique interactions with a nonmember, or different roles that members have within peer groups (e.g., leader or follower). Further, each individual brings a unique perspective that frames the peer group experience (relevant to the perceived vs. actual reports of peer group characteristics discussed previously). Both shared experiences and individual differences in the peer group are important to understanding the impact of the peer group on development.

Previous research has not explored the nature and extent of shared versus nonshared experiences in the peer group context and the impact on academic outcomes. Multilevel analysis techniques, increasingly used to investigate contextual effects in the last 10 years, should aid the investigation of shared peer group effects. Briefly, multilevel methods have advantages over ordinary least squares regression in that they partition the total variance of an outcome into its within-group and between-group variance components (Bryk & Raudenbush, 1992). For example, the proportion of variance in achievement goals that lies between peer groups and the proportion of variance within peer groups is simultaneously estimated. Only the proportion of the total variance that is between peer groups could be due to group effects, and only this proportion of the variance may be modeled as shared peer group socialization effects. Thus, multilevel methods are helpful in determining the extent to which there are shared peer group effects and appropriately exploring shared peer group effects on motivation, engagement, and achievement (see Ryan, 1999, for a more detailed explanation and example of multilevel methods regarding peer group effects).

In summary, definitions that distinguish motivation, engagement, and achievement make it clear that most research concerning socialization in the peer group context has concerned engagement and achievement in school, not motivation. Methodological considerations make it clear that there is ambiguity about the identified processes and effects of peer group influence. These definitional and methodological considerations are important to understanding the current state of knowledge regarding the peer group as a context for the socialization of motivation, engagement, and achievement. However, given the dearth of work in this area, some of these methodological considerations are downplayed for the purpose of drawing on extant research to discuss the possible role of the peer group in the socialization of motivation, engagement, and achievement. For example, I draw on research ex-

aming best friendships and crowds because, although conceptually distinct from peer groups, such groups may provide insight into peer groups given the absence of work examining peer groups. Throughout this article I draw attention to the various methodologies used by researchers and their implications for our understanding of peer group socialization processes.

### SIMILARITY AMONG PEER GROUPS

A plethora of research in the risk-taking literature has documented that best friends, close friends, and peer groups are similar regarding the use of alcohol, drugs, and cigarettes (e.g., Cohen, 1977; Ennett & Bauman, 1994; Kandel, 1978; Urberg et al., 1997). There is also evidence for similarity among best friends, close friends, and peer groups concerning academic outcomes, although there is less research on this topic. Best friends have been found to be similar on behaviors such as frequency of cutting classes (Kandel, 1978) and time spent on homework (Cohen, 1977). Ide et al. (1981) conducted a meta-analysis of studies published from 1966 to 1978 that examined similarity of best friends and students' lists of close friends in the academic realm. Across the 10 studies reviewed, friends were similar in regards to academic achievement: An individual and his or her friends' grades and test scores were moderately correlated (median correlations were .17 for grades and .26 for standardized test scores). In addition, friends were similar regarding college aspirations (Ide et al., 1981; see also Kandel, 1978). This indicates that similar students tend to come together and associate with one another. However, as discussed previously, evidence that individuals are similar to their friends regarding various academic outcomes is not evidence for socialization within the peer group context. Does this peer group context then serve to influence motivation, engagement, and achievement?

### SOCIALIZATION IN THE PEER GROUP CONTEXT

Several short-term longitudinal studies using reports of peers have provided evidence that socialization of academic outcomes occurs in the peer group context. The first two studies to examine peers as socialization agents of academic outcomes examined best friend dyads in high school students (Cohen, 1983; Kandel, 1978). Over the course of the school year, both the processes of selection and socialization contributed to similarity between best friends in college aspirations.

Research by Epstein (1983) expanded our understanding of the role of peers in influencing academic outcomes by including both middle and high school students in the sample, examining the influence from three close friends rather than only best friends, and considering additional outcomes. Three close friends were found to be important to changes in adoles-

cents' achievement and affect in school. Controlling for their initial levels of achievement (i.e., grades and test scores), students with high-achieving friends showed greater increases in achievement over time compared to students with lower achieving friends. This same pattern of effects was found for satisfaction with school: Associating with friends with positive affect toward school enhanced students' own satisfaction with school, whereas associating with friends with negative affect toward school decreased it.

After a hiatus in work concerning academic outcomes in the peer socialization literature, Kindermann (1993) provided the first study to examine naturally occurring peer groups. Using social composite mapping, the peers each child tended to interact with the most within the classroom were identified. These naturally occurring peer groups, varying in size from two to seven students (average size = 2.3), were found to be important for students' engagement in learning activities. In the first month of school, fourth-grade children tended to affiliate with peers who shared a similar level of engagement in schoolwork. At the end of the school year, a student's peer group predicted engagement in schoolwork beyond the level of engagement in the fall. Kindermann, McCollam, and Gibson (1996) replicated this finding with adolescent (9th through 12th grade) peer groups (range 2–14, average size 4.3 for 9th grade students and 1.7 for 11th and 12th grade students).

Berndt and Keefe (1995) provided additional evidence for peers as socializing agents of engagement and achievement. The findings that are most relevant to this discussion concern the influence of three best friends on changes over the school year in two indexes of engagement (involved behavior and disruptive behavior) in school, and one measure of achievement (grades). Changes in student involved behavior as rated by the teacher were predicted by the fall involvement scores of three best friends. Changes in students' self-reported disruptive behavior were predicted by the fall disruptive scores of three best friends. Changes in student grades were predicted by fall grades of three best friends.

Two recent studies provide initial evidence that peer groups are important to the socialization of motivation. Using social network analysis to identify naturally occurring peer groups and multilevel analyses to distinguish individual from group effects, Ryan (1999) found that the peer group was influential regarding changes in students' intrinsic value for school (i.e., liking and enjoying) as well as achievement (i.e., report card grades) during their 1st year in middle school. However, the peer group was not influential regarding changes in students' utility value for school (i.e., importance and usefulness), and there was only a trend regarding peer group influence on expectancies for success in school ( $p < .15$ ). Berndt, Hawkins, and Jiao (1999) examined, among other things, the influence of three best friends on changes in student perceptions of social and cognitive competence from fall to spring of their seventh-grade school year. Changes in students' perceptions of social competence were positively

predicted by friends' fall scores of social competence, whereas changes in students' perceptions of cognitive competence were negatively predicted by friends' fall scores of cognitive competence.

In summary, although understudied compared to other socializing agents in adolescents' lives, the peer group is important to understanding motivation, engagement, and achievement. Initial work more than 20 years ago established peers as socializers of adolescents' college aspirations. In the ensuing years, evidence has accumulated that peers also socialize engagement and achievement in school. Recently, researchers are starting to examine peers as socializers of motivation. Initial evidence indicates that peers are important socializers for some facets of motivation and that peer influence may not always lead to increased similarity among peer group members. Thus, the peer group as a context for the socialization of motivation is an important direction for research to proceed and will likely expand our understanding of peer effects on engagement and achievement. Do changes in motivation lead to changes in engagement and ultimately achievement, or are behaviors initially socialized so that motivational beliefs ultimately change as well? These are just a few of the unanswered questions that need to be addressed regarding the processes involved in the socialization of academic outcomes in the peer group context.

#### SOCIALIZATION: REINFORCEMENT OR CHANGE?

Another important question regarding socialization in peer groups that has not been addressed is whether socialization serves to change or reinforce adolescent characteristics. Brown, Mounts, Lamborn, and Steinberg (1993) suggested that peer group members select each other based on similar characteristics. The resulting socialization among peers reinforces rather than changes an adolescent. However, peers are not similar on all characteristics. Whereas certain characteristics may be similar and are thus reinforced, what about characteristics that are different among peers?

Cohen (1983) suggested that whether socialization results in reinforcement or change depends on initial similarity. If individuals are similar on a characteristic, then the pressure will be to remain the same on that characteristic. On the other hand, if individuals are different on a characteristic, the pressure will be for change to occur so that similarity may be achieved. Similarity is in part due to selection. As Brown et al. (1993) suggested and others have documented, an important component of interpersonal attraction and selection of friends is similarity. Whereas some characteristics will tend to cluster (i.e., certain values, attitudes, and behaviors tend to go together), it is impossible to find individuals similar on all or even many characteristics. When friendships are initially formed, peers will be similar on some characteristics but different on others. The resulting socialization process among peers will be affected by the initial similarity. Evidence of in-

creased similarity among friends over time (for a review, see Kandel, 1986) suggests pressure for change to occur toward increased similarity.

There is another important dimension that affects the socialization process among peers that has not been considered in the peer socialization literature. Because it is impossible to select friends who are similar in all characteristics, it makes sense that selection focuses on the characteristics that are most central to an individual's identity, the characteristics valued most. It is still likely that there will be valued characteristics that are not shared with friends. The personal value that an individual has for a characteristic could determine if he or she is resistant or receptive to change on that characteristic. A belief or activity that is an important part of an individual's identity and high in personal value is resistant to change. By resisting change on a valued characteristic, an individual exerts pressure on the other peers to change to achieve similarity. On the other hand, a person is likely to be more receptive to change on a given characteristic when it holds little meaning or value. A person is also likely to be more receptive to change on novel beliefs, attitudes, or activities. However, this is not likely to be a factor in the socialization of motivation, engagement, and achievement.

Thus, there are two important dimensions when friendships are forged that influence the socialization process that transpires among individuals: similarity and value. Similarity on any given characteristic affects the pressure that exists among peers to change—high similarity results in pressure to stay the same or at least no pressure to change, and low similarity results in pressure to change. The personal value that an individual attaches to a characteristic affects the individual's response to change—high value results in resistance to change, and low value results in receptiveness to change. Variance along these two dimensions could result in four categories, depicted in Figure 1. The socialization process could work very differently in these four categories. In Category 1 there is pressure to stay the same (or no pressure to change) and resistance to change by the individual; characteristics are reinforced. In Category 2 there is pressure to stay the same (or no pressure to change), and the individual is receptive to change; characteristics are inert. In Category 3 there is pressure to change and resistance to change by the individual; the result is conflict for an individual. In Category 4 there is pressure to change, and the individual is receptive to change; characteristics are changed.

Acknowledging that the dimensions of both similarity and personal value affect the socialization process provides a more interactive view of the socialization process among adolescents and their peers. Such a view is appropriate for the peer group context because, unlike contexts such as family and school, the peer group is to a certain extent voluntary. Although there are external constraints, an individual does have some control over who his or her friends are. Selection and socialization processes are ongoing. Friendships end and new ones begin throughout adolescence. Even within stable peer

Personal Value Dimensions when Friendship Formed  
Influences Resistance/Receptiveness to Change

		HI	LO
Similarity Dimension when Friendship Formed Influences the Pressure to Change	HI	Resistance to Change Low pressure to change (or pressure to stay the same)  <u>Reinforced</u>	Receptive to Change Low pressure to change (or pressure to stay the same)  <u>Inert</u>
	LO	Resistance to Change Pressure to Change  <u>Conflict</u>	Receptive to Change Pressure to Change  <u>Changed</u>

FIGURE 1 Dimensions that influence the socialization process.

relationships, the socialization process is dynamic and constantly evolving. As individuals change, relationships are renegotiated, and the socialization process is transformed. For example, if an individual is initially different from the peer group on a certain characteristic, then the socialization process works to change that characteristic. If the characteristic changes then the socialization process now works to reinforce the characteristic.

There is an important question stemming from this interactive and dynamic view of the socialization process among peers and adolescents: What characteristics are the important criteria of peer group affiliation during adolescence? More specifically, regarding the focus of this article, do motivational characteristics play a role in peer selection? Motivation, engagement, and achievement have been found to be important variables for peer group selection (Berndt & Keefe, 1995; Kindermann, 1993; Ryan, 1999). However, these studies considered only academic variables during the course of 1 school year. Future studies could consider multiple variables to determine their relative importance in choice and selection of peer groups. Further, longitudinal studies could address whether the criteria change during adolescence.

The characteristics important to adolescents could vary greatly. For certain students, it may be important to have achievement motivation similar to their friends. Selection would result in similarity among peers regarding motivation, and the socialization process would serve to reinforce initial characteristics. Of course, the initial characteristics could be positive or negative, and the socialization process

could support both desirable and undesirable achievement beliefs and behaviors. For others, the peer group may be selected according to other criteria, and achievement beliefs and behaviors are socialized as a result. Athletics, dating, and sexual behavior as well as alcohol, drug, and tobacco use have been shown to be important to friendship choice in adolescence (e.g., Billy & Udry, 1985; Ennett & Bauman, 1994; Urberg et al., 1997). For some adolescents, other interests may compete with or take precedence over similar academic motivation and engagement as criteria for selecting a peer group. This could put an adolescent's motivation and engagement in school in a precarious position. If the peer group is similar regarding these less-valued characteristics, then the socialization process would not exert any influence on the characteristics (which are reinforced, as shown in Figure 1). However, if the peer group is dissimilar regarding these less valued characteristics, there is great potential for change, and of course change could serve to foster or undermine desirable motivation, engagement, and achievement. Through selection, some adolescents may place themselves in peer group contexts that support or foster their achievement-related beliefs and behaviors. Others may place themselves in contexts that undermine achievement-related beliefs and behaviors.

To this point in the article I have discussed the socialization process in general terms but have not addressed exactly how peers influence an adolescent. Much of the research that investigates peer influence ignores or assumes the specific experiences between the peer group and an adolescent that are involved in the socialization pro-

cess. To fully understand the socialization process between peers and an adolescent, it is important to investigate specifically the nature of what transpires in adolescent peer relationships. The following section discusses research that has examined the interactions between peers that may affect adolescent outcomes.

## EXPERIENCES WITH PEERS

During adolescence, the peer group becomes a prominent context for development (Brown, 1990). Peer interactions consume significantly more time in adolescence compared to childhood. By high school, adolescents spend twice as much time with their peers (29%) as with their parents or other adults (15%; Csikszentmihalyi & Larson, 1974). It seems intuitive that peer influence stems from the information exchanged and experiences shared during interactions among adolescents and their peers. Indeed, schools and classrooms are social places; students are surrounded by peers and interact with peers throughout the school day. Interactions with peers concern academic and nonacademic matters, and it is hard to imagine that they would not influence adolescent motivation and engagement in school. Three ways that experiences with peers may influence an adolescents' motivation, engagement, and achievement in school are information exchange, modeling, and reinforcement of peer norms and values.

### Information Exchange

Discussions among peers may present an adolescent with new ideas and different perspectives (Berndt, 1999). Findings from an experimental study suggest that influence depends on such information exchange. Berndt, Laychak, and Park (1990) explored peer influence in an experiment that involved decisions made regarding hypothetical dilemmas about academics. For example, one dilemma described a situation in which a choice needed to be made between going to see a favorite rock band or studying for an exam. Eighth-grade students responded to the dilemmas both before and after discussions with a close friend about the dilemmas. Berndt and his colleagues did not analyze the manner in which friends influenced each other but rather focused on whether the discussions increased the similarity of friends' decisions on the dilemmas. Friends became more similar after the discussions.

Although this study provides evidence for peer influence on a decision regarding academics, it is somewhat limited in that the measure is a decision on a hypothetical dilemma in a lab that pits academic concerns against a social event. However, social endeavors with peers do not always undermine academics. Further, although this scenario may be one type of motivational decision an adolescent may encounter, there are other decisions an adolescent makes on a daily basis regarding

engagement in school that may be more relevant to understanding achievement. More ecologically valid investigations of peer influence on motivation, engagement, and achievement via information exchange are needed to gain a more complete understanding of peer group influences.

### Modeling

Studies that predict adolescent beliefs and behaviors from peer beliefs and behaviors often assume that modeling processes are involved. Modeling refers to individual changes in cognition, behavior, or affect that result from the observation of others. Observing others perform a particular behavior or voice a certain belief can introduce an individual to new behaviors and viewpoints and also inform an individual of the consequences of such behaviors and opinions. Depending on the consequences, observation of a model can strengthen or weaken the likelihood that the observer will engage in such behavior or adopt such beliefs in the future (Bandura, 1986; Schunk & Zimmerman, 1996). It is highly probable that modeling plays a role in the socialization of beliefs and behaviors among peer group members. However, studies that predict adolescent behavior from peer behavior do not necessarily constitute evidence for modeling as the mechanism between others and the individual because modeling processes have not been directly examined (e.g., Hundleby & Mercier, 1987; Kandel & Andrews, 1987; Ryan, 1999).

Experimental studies provide evidence that peers are potentially powerful models for the socialization of motivation, engagement, and achievement. For example, studies have found that children change their criteria for standards for self-reward on experimental tasks after observing the self-reward behavior of a peer (e.g., Bandura & Kupers, 1964; Davidson & Smith, 1982; Lepper, Sagotsky, & Mailer, 1975). In addition, children's preference for challenge on a variety of tasks is influenced by exposure to a peer model's preference for a challenge (Sagotsky & Lepper, 1982).

Schunk and Zimmerman (1996) provided evidence that self-efficacy beliefs are influenced by peer models. For example, children who experienced difficulties with mathematics were exposed to a mastery or coping model who was working on mathematics problems. Peer mastery models solved math problems correctly and verbalized statements reflecting high self-efficacy and low task difficulty. Peer coping models initially demonstrated difficulty with the problems and verbalized negative statements but ultimately verbalized high-efficacy statements and solved the problems correctly. For children who experienced problems in math, coping models enhanced self-efficacy (Schunk, Hanson, & Cox, 1987). Their own self-efficacy was bolstered—perhaps thinking, "If that student can have trouble and then succeed then even if I have trouble I can succeed." In another similar experiment, peer models (either mastery or coping) increased self-efficacy better than exposure to no models (Schunk & Hanson, 1989).



Such work indicates that modeling is a likely mechanism in the peer socialization of motivation, engagement, and achievement. However, given that these studies were experiments we do not know how such modeling processes may unfold within the classroom. Whereas experiments expose students to one model, schools and classrooms provide an individual with an array of potential models, and modeling processes are likely to be much more complex in the classroom. Which peers do adolescents choose to model their behavior after? Are they members of the adolescents' peer group? Do social or academic consequences of modeled behavior take precedence? Modeling is likely to be an important process in how peer groups socialize motivation, engagement, and achievement. Strong evidence for peer models in experimental studies needs to be expanded to naturally occurring peer group contexts within school.

### Reinforcement of Peer Group Norms and Values

Peer pressure has also received considerable attention as the means by which similarity is produced within a peer group. Although a popular notion both in popular culture and scientific research, peer pressure is a somewhat ambiguous concept. Studies that document that peer groups become more similar over time have assumed that peer pressure is involved. Social reinforcement is presumed to play a role. Beliefs and behaviors that are discouraged or received negatively by the peer group are less likely to be displayed again by an individual. Conversely, beliefs and behaviors that are encouraged or positively received by the peer group are more likely to surface again in the presence of one's peers. Whether such reinforcement is subtle or direct and the extent to which it actually occurs are areas that need further investigation.

Brown and his colleagues (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985) conducted extensive research on the existence and nature of peer pressure in adolescence. These researchers used a direct approach, asking high school students about the degree and direction of pressure they believe their peers exert on them in various areas of their lives. Brown and his colleagues measured peer pressure by presenting students with 53 items on which they indicated the degree and direction of peer pressure that they perceived their friends exerted on them. Peer pressure was defined for the students as "when people your own age encourage or urge you to do something or to keep from doing something else, no matter if you personally want to or not" (Clasen & Brown, 1985). The 53 items were divided into five areas of peer pressure: peer norms, misconduct, involvement with school, involvement with family, and involvement with peers (Brown et al., 1986; Clasen & Brown, 1985).

Adolescents perceived pressure from their peers, and it was significantly correlated with personal attitudes and behaviors (Brown, Clasen, & Eicher, 1986; Brown, Lohr, &

McClenahan, 1986). Adolescents perceived peer pressure in many areas of their lives, and such pressure can be both negative and positive (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985). The strength and direction of perceived peer pressure varies greatly among different peer groups (Clasen & Brown, 1985). Whereas pressure to be involved with one's peers and to follow peer norms was the same across all peer groups, students who were identified as "jock-populars" perceived more pressure in the area of school involvement and less pressure toward misconduct than students identified as "druggie-toughs." This finding is particularly important because it establishes that peer groups vary greatly in their characteristics and influence. Although this study investigated larger crowds rather than peer groups, the findings are relevant to peer groups and suggest that studies that examine characteristics and pressure for the student body as a whole will mask or distort important differences that exist among peer groups.

Peer pressure may also play a role in how the peer group influences adolescent motivation. Brown and his colleagues (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985) found that adolescents perceive peer pressure regarding school involvement; such perceptions are significantly correlated with self-reported behaviors and attitudes regarding school. However, in this study involvement in school involved both academic and extracurricular matters. This division seems to have been made on conceptual rather than empirical grounds (i.e., factor analysis was not reported). Another conceptual argument could be made that distinguishing between academic and extracurricular aspects of school is important to understand how peer pressure may affect motivation, engagement, and achievement in school. One can imagine that pressure may vary greatly between joining the soccer team or drama club and motivation, engagement, and achievement in math class. Investigations focusing specifically on academics may better illuminate the role peer pressure plays in shaping individual motivation, engagement, and achievement.

Brown and his colleagues (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985) contributed much to existing knowledge on peer pressure, but many gaps in our knowledge still exist. First, the finding that perceived peer pressure in a domain is correlated with attitudes and behaviors only in that domain suggests that peer pressure influences attitudes and behaviors. Longitudinal data could contribute much to our understanding in this area. Second, exactly how such pressure is enacted remains unclear. Future studies need to identify the specific ways in which peer pressure is expressed in the peer group context. Brown (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985) asked adolescents directly about a rather abstract notion. Future studies may ask students about more specific behaviors of their peers that pressure them to act a certain way.

Some researchers (Berndt & Keefe, 1992; Urdan & Hicks, 1995) used interviews to examine peer pressure concerning academics in school. These approaches are similar to that of Brown and his colleagues (Brown, Clasen, & Eicher, 1986; Brown, Lohr, & McClenahan, 1986; Clasen & Brown, 1985) in that students were asked directly about the nature and extent of peer pressure they perceive, but it builds on Brown's work in that these students were also asked the extent to which they believe it actually influences them. Berndt and Keefe (1992) found that most seventh-grade students denied that their friends had any effect on their beliefs and behaviors toward school. Only about one third gave a "yes" response to questions about friends influence (i.e., 35% and 28% in each sample, respectively). On the other hand, Urdan and Hicks (1995) found that 77% of eighth-grade students said they were influenced by their friends and the influence was generally positive (63%). It is interesting to note, however, that more respondents said that other students were negatively influenced by their peers (50%) than positively influenced (38%). This difference could suggest that students were answering in a socially desirable way or may represent an attributional bias (Pintrich & Schunk, 1996). The students in the sample were higher achievers than the pool of students from which they were selected so it may reflect the actual state of things.

It is interesting that these studies, which used such similar methods of inquiry, found such different results. One potential reason may be that Berndt and Keefe (1992) asked students about their best friends, whereas Urdan and Hicks (1995) asked students about their friends. Another reason may be Urdan and Hicks's use of scenarios in addition to direct questions. Although the authors expressed doubts about the effectiveness of the scenarios, the direct questions seem fairly analogous in both studies. Thus, the scenarios may have led to the increased recognition of peer influence in their study.

Both studies further investigated adolescent perceptions of peer pressure by probing the reasons that students believed their friends did not influence them. Some students in both studies reported that the lack of peer pressure regarding academics was because they rarely talked about school (percentage not provided). However, this does not necessarily mean that peer pressure is not operating; rather, it could be that peer pressure is a subtle and indirect process. Observations of middle-school students have shown that adolescent girls use a variety of ways to influence their peers but most of these processes are indirect (Eder & Sanford, 1986; Simon, Eder, & Evans, 1992). Gossip, teasing, and humor were the predominant ways group norms were communicated. Gossiping about others, for example, is a means of clearly communicating unacceptable peer behavior without confrontation. Such indirect methods allow for learning to take place without bringing forth strong negative feelings (Eder & Sanford, 1986). Perhaps such indirect methods also allow for influence to occur without the complete awareness that one is being influenced. Another example is provided by Dishion, Spracklen, Andrews, and Patterson (1996). Boys who are high in antisocial

behavior encourage antisocial behavior by laughing when a friend jokes about deviant or illegal behavior. Although these studies did not specifically focus on academics, peer group influence in the domain of academics is likely also to involve such indirect processes of reinforcing peer group norms and values.

## MODERATORS OF THE SOCIALIZATION PROCESS

Another important question for future research is to identify individual and peer group characteristics that may moderate socialization processes. Who may be particularly vulnerable to peer influence? Under what conditions may peer influence be particularly strong? Although our knowledge of such moderators is incomplete, research indicates that individual characteristics such as gender (Berndt & Keefe, 1995), personality (Schulenberg et al., 1999), and status within the peer group (e.g., leader or follower) will affect the magnitude of peer group effects. In addition to individual differences, peer group contextual differences such as size and cohesion may be expected to change the nature and extent of group socialization processes. In the following sections, I briefly consider two other aspects of the peer group context that may impact the socialization process in peer groups.

### Quality of Peer Relationships

The focus of this article has been on how the characteristics of one's peer group may influence an adolescent. However, an important dimension of peer relationships is not captured in the category of peer characteristics. This dimension transcends specific characteristics of one's peers and concerns the quality of peer relations in areas such as enjoyment, trust, support, jealousy, rivalry, or antagonism. These qualities of shared affection or disaffection, regard or disregard between adolescents and their peers are likely to influence individual outcomes that result from the peer group. For example, Berndt et al. (1999) found a significant interaction between friendship quality and friends' characteristics (i.e., behavioral problems) on changes in adolescents' behavioral problems as rated by the teacher. The negative influence of misbehaving friends was magnified when these friendships were high in quality. Considering how the quality of peer relationships and characteristics of one's peers interact to influence adolescent outcomes could add to our understanding of peer influence (see Berndt, 1999, for more discussion of this point).

### Multiple Peer Group Membership

It is important to note that adolescents may belong to multiple peer groups. Affiliation with more than one peer group could be part of the experimentation with different roles and the search for identity often associated with adolescence (Harter, 1990). Although acknowledging multiple peer group influ-

ences makes conceptualizing the socialization processes in the peer group context even more complex, it is an important aspect of peer group influence that has received little attention. Multiple peer group memberships could have many outcomes for adolescent motivation, engagement, and achievement. Characteristics of multiple peer groups could be congruous or incongruous concerning motivation, engagement, and achievement. If congruous, the effects of peer influence may be intensified. However, the peer groups may differ in regards to motivation, engagement, and achievement. This possibility raises several questions: How do adolescents negotiate among multiple groups? How do adolescents resolve incompatible characteristics of multiple peer groups? What determines which peer groups have more influence? Future research considering such questions is likely to enhance our understanding of peer group contextual influences.

### CONCLUSION

Examining the extent, nature, and scope of peer group influence on academic outcomes is an important direction for future research to enrich our understanding of adolescent motivation, engagement, and achievement. The neglect of research on peer groups is due in part to complex conceptual and methodological issues involved in studying peer groups. However, current theories of achievement motivation are increasingly highlighting the important role of context and socialization agents in the development of achievement beliefs and behaviors (Eccles et al., 1998). Our knowledge is likely to be incomplete without attention to the peer group context. Although there is much we do not know about the role peer groups play in the socialization of motivation, engagement, and achievement, the initial evidence indicates this is a promising direction for future research.

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