

Chapter 11

Why Work When You Can Play? Dynamics of Formal and Informal Organization in Classrooms

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During the 1990s, Charles Bidwell began to focus on the nature of faculty networks and how properties of these networks define instructional practice within schools (Bidwell, Frank, and Quiroz 1997; Bidwell and Yasumoto 1999). While his current work furthers this effort, he has also started to think about how student worlds and learning relate to teacher worlds and instruction. In effect, he has begun to reconceptualize schools as organizations so as to focus on and explain the actual work and interaction that occurs within the technical core of schools. His recent integration of social psychology and actors' definitions of the situation into his theoretical accounts of organizations is a sign of this reconceptualization. This move can partly be seen in his use of particular concepts and themes—formal *and* informal

organization, social networks, school and classroom regimes, participation and interaction. Most recently, Bidwell has called for research on classrooms and detailed study of individual schools (2000, 2001). Such research would catalogue and describe various social processes and practices by which the work of schools gets done.

This chapter follows Bidwell's call and presents a study of high school classrooms that integrates elements of both organizational theory and social psychology. In substantive terms, this chapter asks and answers a series of questions: Why are some classrooms "madhouses" and others calm and work-focused? Why are some individuals much more vocal in tasks and/or sociable forms of participation than others? What characteristics of classrooms and students matter for participation? What types of relations and statuses facilitate or inhibit such action? And what distinguishes task and sociable forms of participation?

Empirically, these questions are concerned with educational settings and the behaviors within them. However, theoretically, they are concerned with the determinants of definitional claims or dominance within informal and formal dimensions of organizational life.^[2] What leads certain classrooms and students to stake active definitional claims of a formal or informal nature? What are the levers of task (work) and sociable (play) forms of conduct?

The interplay of formal and informal dimensions of schools has long been described in the sociology of education. Beginning with Waller (1932), we find early descriptions of how the world of youth is always beyond the reach and comprehension of educators, all too often acting at odds with educational aims. Later work by Coleman (1961) and Stinchcombe (1964) picks up on this theme, and describes how informal and formal dimensions of high schools become oppositional, the former acting as the "under-life" of the latter (Goffman 1961).^[3] Bidwell's seminal chapter on the school as a formal organization (1965) summarizes this literature, contending that most arguments draw attention to structural characteristics of schools and their environments. Remiss in these accounts is a characterization of classroom life and how such oppositions manifest within them. This chapter seeks to contribute to this body of literature by describing how organizational features at multiple levels of analysis influence classroom behavior.

This chapter argues that classroom participation is greatly influenced by various structural

characteristics of classroom settings and individuals' status resources. Particular characteristics of classrooms and individuals within them create rigid or porous normative boundaries to formal and informal organizational conduct. On the one hand, an intuitive finding emerges from this chapter: Forms of conduct, types of status, and classroom relational structures all have dimensional specificity such that formal and informal organizational dimensions are recognized and maintained. On the other hand, there is a subplot: The informal world of adolescents is brought to bear on most every classroom task, while the formal world of academic work is often ignored and rejected in the sociable affairs of youth (Coleman 1961). Thus, while boundaries of formal and informal organization are present, the social world's boundary is rigid whereas the academic world's boundary is porous, thereby creating a somewhat unidirectional flow of influence on classroom participation. In the sections that follow, a series of conceptualizations and research efforts are presented to describe and explain this story of classroom participation.

Differing Qualities of Task and Social Participation

Traditional experimental work in sociology makes a distinction between task and socioemotional behavior. Task behavior is value-neutral and concerns the instrumental goals of a collective activity, while socioemotional behavior expresses positive or negative emotions (Bales 1947, 1970[1950]; Bales and Slater 1955; Burke 1967, 1971). Early organizational theorists greatly rely on the distinction between task and socioemotional behavior as a basis for differentiating formal from informal organization (Barnard 1938; Argyris 1957; Sayles 1963; Lawrence and Seiler 1965).

Recent work in status characteristics theory, however, has revisited and reconceptualized the distinction between task and socioemotional behavior. Ridgeway and Johnson (1990) argue that socioemotional behaviors often arise as part and parcel of completing a task. Therefore, they classify certain agreements and disagreements as task behaviors because the emotions observed are entirely elicited by task concerns. This reconceptualization suggests that task behaviors entail emotional responses insofar as the behavior is motivated by tasks and/or has work as its content (Ridgeway and Johnson 1990). As such, it is the content or purpose of an act (i.e., if it concerns tasks) that makes it identifiable as a form of conduct,

not the correspondence with the action's latent functions of goal attainment or integration.

If task behavior has an emotional component, the problem remains of identifying the distinguishing characteristics of informal social conduct. Conversation analysis of workplace communication and sociolinguistic studies of schools are informative in this regard. Conversation analysis of work settings finds that discourse concerns either the completion of formal tasks or of informal non-task oriented situations (Edelsky 1981; James and Drakich 1993). Informal social discourse is seen to arise when subjects "talk about anything" or "just get to know one another." Sociolinguistic studies of school discourse make a similar claim and distinguish task and social interaction by the *form* and *content* of student discourse (Sieber 1979; Streeck 1984; Mehan 1980; Alton-Lee, Nuthall, and Patrick 1983). Task discourse is described as teacher-centered and concerned with school topics. In contrast, social discourse is described as decentralized and concerned with movies, TV, music, dating, gossip, parties, shopping, rock concerts, and sporting events (Sieber 1979; Doyle 1986). Informal social discourse is even identified with certain activities that have interaction rules distinct from those used in class tasks, such as gossip, collaborative storytelling, and ritual teasing (Eder 1995, 1991, 1988; Eder and Enke 1991; Goodwin 1980).

In light of research in sociolinguistics, this chapter takes Ridgeway and Johnson's argument one step further. Within the activities of gossip, teasing, and "getting to know one another," persons interact with informal sociable concerns in mind (Simmel 1949; Huizinga 1950), and they may or may not express emotions in the process. In this chapter, formal task conduct is regarded as turns of interaction that concern the completion of tasks prescribed by the organization and its agents. In contrast, informal social conduct is regarded as turns of interaction that do not pertain to the completion of prescribed tasks, but rather to personal or external topics and more sociable affairs of play (Garvey 1990). According to this conceptualization, socioemotional behavior can pertain to tasks and/or social affairs. Actors express anger, frustration, joy, and criticism in their efforts to control both work and play activities (Ridgeway and Johnson 1990). Granted, emotive behavior is more overt in sociable affairs since action is given looser reign (see McLaren 1986). Nonetheless, task and sociable behaviors are regarded as distinct dimensions of organizational conduct with different topics and styles of discourse.

Two Levers of Participation: Contexts and Statuses

What are the causal levers that make some classrooms and students more vocal in task and/or sociable affairs? When actors enter organizational settings like classrooms they make decisions about how to act. These decisions are framed by the definition of the classroom situation (Thomas 1923; Bidwell 2000, 2001). Such definitions are partly characterized by the classroom context, or the *social opportunities*, *political climate*, and *status resources* that individuals have at their discretion.

Contexts and Participation

Descriptions of *formal and informal contexts*, and particularly relational channels, have long been the forte of organizational studies of work settings. For the most part, these studies describe how work gets accomplished through formally prescribed role relations and emergent friendship relations (Ibarra 1992; DiMaggio 1992; Krackhardt 1992, 1993; Selznick 1949; Gouldner 1954; Blau 1963). A common finding is that work often gets accomplished outside the prescribed roles and relations of tasks, and that workers rely on their friends to achieve organizational goals. Hence, studies of organizations suggest that there are distinct organizational contexts (of formal and informal relational channels) through which tasks and social affairs are enacted.

Classroom contexts have sets of work routines that are prescribed by the teacher and define students' *social opportunities*, or access to public discourse in tasks. Moreover, repeated tasks establish a pattern of work relations that entail certain expectations and norms of conduct. In teacher-centered classes, the persistent use of lecture, recitation, and other didactic forms of instruction will render students passive participants, or at most co-participants following the teacher's lead (Goffman 1981). In student-centered classes, the persistent use of group work, collaborations, and discussions render students active participants, or co-authors that direct their own learning experiences (Bossert 1977; Metz 1978; Doyle 1986; Stodolsky 1988). Student-centered tasks demand active task participation, while closed task structures focus interactions on the teacher and particular students, and therefore create very different opportunities for task

involvement and patterns of work relations.

Classrooms also entail friendship relations that define the *political climate* of the setting. Some friendship structures are sparse and centered on certain individuals. These contexts tend to be contentious and judgmental and inhibit socializing except between close friends (Giordano 1995; Fine 1987). Other networks have wide reach and entail dense sets of interrelated friends. These contexts not only provide students with interpersonal support, they make interpersonal demands—that friends socialize with one another and maintain that role relation in spite of the demands of class tasks. While dense networks reinforce and embolden students (they can be mobilized, DiMaggio 1992), they also demand heightened attention to play.

The structure of tasks and of friendships define different role expectations and relational channels through which work and play get enacted. Clearly, work routines establish expectations for task participation, and primary group relations establish expectations for sociable participation. As such, they act as structural anchors to different types of conduct and establish a degree of *dimensional specificity* across structure and conduct. However, the organizational literature suggests that informal relations can affect task behaviors, and that formal work routines can affect informal social conduct (Roethlisberger and Dickson 1939; Krackhardt 1993). That is, it suggests that there is *translation across formal and informal organizational boundaries*—where formal relational channels become avenues to play and informal relational channels become avenues to getting work done (Powell 1990; Bidwell 2000). This makes sense if we assume that natural settings entail multiple situations, and that participants have multiple identities and role relations with one another (McFarland 2003).

If we construct a table that cross-classifies the types of conduct with the types of relational channels, we acquire a property space with which to describe work and play as they get enacted in different relational dimensions of the classroom. In Table 11.1a, some cells identify channels and forms of conduct that are consistent with traditional boundaries of formal and informal organization (e.g., dimensional specificity, cells 1 and 3), while others identify interdimensional translations, where the structure of work routines alters the affairs of play, and where friendship networks mediate the conduct of work. A central empirical

question of this chapter is when and where dimensional specificity and interdimensional translation occurs across structural contexts and forms of conduct (work and play).

[Insert Table 11.1a about here]

Status and Participation

While organizational research informs us of different contexts for action, status characteristics research informs us of the *resources* actors use to dominate interactions (McFarland 2001). When actors have certain status characteristics, such as a reputation for being smart or popular, they are given access to discourse. When actors lack those status characteristics they are perceived as illegitimate participants. In the research on classrooms, two local status characteristics are repeatedly described as highly salient to dominance behaviors: local academic and peer status (Cohen and Lotan 1997a).^[4] Local statuses are described as being quasi-independent of the diffuse status characteristics of race, class, and gender that are found to be salient in controlled laboratory experiments (Berger, Cohen, and Zelditch 1972).^[5]

Even though research on classrooms has identified academic and peer bases of status, researchers almost always collapse them into a single status measure for their statistical models (Cohen and Lotan 1997a). In her work on elementary school classrooms, Cohen collapses these types of status because she finds academic and peer status to be highly aligned. However, recent work on middle school classrooms has found that these types of status can be unrelated or even opposed to one another (Cohen and Lotan 1997b; Chiu 2000). Work by Chiu (2000) leaves these status characteristics distinct from one another and finds them to have independent effects on student outcomes.

Nevertheless, research on expectation states has not expanded the scope conditions beyond collaborative group activities. Moreover, it has repeatedly ignored the sociable behaviors that arise within such activities. Even though peer and academic status are viewed as quasi-independent, they are not hypothesized to have different behavioral referents. This chapter argues that when status dimensions diverge, dimensional specificity of status and conduct occurs (as it does for context and conduct). Students with highly regarded academic reputations will be considered more appropriate participants in tasks because

they reputedly have high competence in schoolwork. In contrast, students with a great deal of social rapport will be considered more appropriate participants in social affairs because they are more liked and are considered social leaders by their peers. In either type of activity, there are distinct notions of reputation, competence, and legitimacy that define active participants. When academic and peer status oppose one another, participation in one type of interaction undermines the actor's legitimate participation in another type of interaction.

A second table cross-classifies the types of conduct with peer and academic status and defines a property space with which to describe status effects on classroom participation. In Table 11.1b, some cells (e.g., 1 and 4) identify the expected relationship between types of status and types of conduct—dimensionally specific correspondences between play and peer status and between work and academic status. Other cells (e.g., 2 and 3) identify more surprising relations between types of status and types of conduct—interdimensional translations, where academic status can alter the affairs of play, and where peer status can mediate the conduct of work. Whether dimensional specificity or interdimensional translation occurs between types of status and conduct is another question addressed in this chapter.

[Insert Table 11.1b about here]

I argue that participation in classroom tasks and sociable situations is partly dictated by the structure of work activities and friendship relations as well as by the academic and social status a student has within the setting. Clearly, classrooms can be composed of both dense networks and student-centered tasks, each having similar effects on student conduct. Likewise for status: Peer status and academic status may encourage task and/or sociable participation. By analytically distinguishing these types of contexts and statuses, I attempt to identify their independent effects on task and sociable forms of participation in classrooms. By devising a formal model that includes separate variables for each of these contexts and statuses (and controls for diffuse statuses), I can identify which types of organizational contexts and statuses have additive, independent effects on participation in academic and social affairs and thus determine why some classes and individuals are more academically and socially vocal than others.

Study Design

Settings

The data analyzed were collected in a yearlong field study of task and sociable participation in thirty-six classrooms (for details see McFarland 1999, 2001). Two schools serve as the settings for the analyses in this chapter: River High and Magnet High. River High is a traditional, tracked high school located in “River Town” (17,500 residents), a small Midwestern town approximately 100 miles from a large metropolitan area. The high school has around 1600 students and serves a community population of approximately 25,000 residents. Most students are from River Town, but a third come from significantly smaller towns and outlying rural areas. Almost all the residents are white with only 3 percent of the population consisting of racial minorities.

Many River Town students and faculty regard students from the outlying regions and small towns as provincial and regard themselves as more cosmopolitan. This status distinction is somewhat solidified by feeder patterns into the high school. Within River Town, students attend the same large middle schools, while other residents of the region are spread out across multiple smaller middle schools. Upon entering River High, the rural residents are at a social disadvantage in terms of familiar others (Schiller 1999). They begin the year with less extensive social networks to buffer them from the “hick” attribution classmates and teachers make.

Magnet High is very different from River High. It is located over 500 miles away from River Town in a dilapidated neighborhood of a large city. Magnet High has around 900 students enrolled in grades 8 through 12. The student body is racially and economically heterogeneous, and is bussed in from all over the city. The student population is 50 percent white, 35 percent African-American, 10 percent Latino, and 5 percent Asian-American. Magnet High is, as the name implies, the school district’s arts and science magnet that admits students on the basis of test scores. Hence, while its population may be economically and racially diverse, it is homogeneous in terms of ability. Students and faculty at Magnet distinguish one another according to race and wealth. Race is a salient characteristic at Magnet primarily because of residential segregation. Whites often live on the outskirts of the city while African-Americans and Latinos

live in the center.

Data

I use several sources of data for the study of student participation and status within classrooms: classroom observations, surveys, and school records. At each school, classroom observations focused on tenth and twelfth grade core subjects (i.e., English, math, history, and science). An effort was made to span the different course ability-levels in tenth and twelfth grade. Core subjects were selected for observation because they were more readily comparable across schools. Moreover, in a policy climate that stresses increasing standards in core subjects, it was thought important to understand the learning process that takes place within the “canon” of American high schools. Tenth and twelfth grades were observed for more pragmatic reasons. It was apparent that a single researcher could not observe the entire population of students at these schools, and tenth and twelfth grade students had been the focus of a prior study that took place at both sites (see Csikszentmihalyi and Schneider 2000 for a description of the earlier study).

In all, an average of twelve class periods for each of thirty-six classes were observed over the course of the 1996-97 school year. This focal set of thirty-six classes entailed a sample of around 751 students that were observed during the first semester. Only twenty-five of these classes persisted into second semester, providing a sample of 467 students for longitudinal surveys and observation. There are thus two samples: one larger cross-sectional sample, and a longitudinal sub-sample.

Classroom Observations

Each class's use of different activities (Stodolsky 1988) was recorded, and exchanges among classroom participants were enumerated. Instead of videotapes, a shorthand method of coding interaction turns was used with a great deal of accuracy in the more controlled classroom environments. In more open classrooms, several turns of interaction sometimes arose simultaneously and in a less sequential fashion. This made full enumeration difficult even though patterns of interaction were recorded accurately. To compensate for this discrepancy, the observer estimated the proportion of interaction exchanges recorded for that segment; later, the rate of interaction was adjusted accordingly. The observation data used in quantitative analyses rely on the coding of student-initiated turns at interaction in either task or social

activities. The coding of student-initiated turns at interaction is preferable to initiate-reply sequences since replies are often implicit. Student-initiated turns are observable claims.

Surveys

Two different surveys were administered to students during the school year, and one was administered to teachers. The first student survey was classroom-specific and administered to students in the thirty-six focal classrooms (95 percent response rate). The survey included a sociometric form that asked students to nominate classmates that they “hung around” with as friends (McFarland 1999). This classroom survey was administered in November and again in April. The second survey did not focus on the particular classroom setting but asked students about their lives in general. This form asked students to describe their family and their parents’ occupations. In addition, it included a sociometric form that asked students to list the friends that they “hung around” with outside of class and on weekends (Csikszentmihalyi and Schneider 2000). As such, it acquired information on the student’s social network whereas classroom sociometric surveys asked about friendships specific to the classroom setting.^[6] This survey was administered once in April 1997.

School Records

School records provided an array of information. Course schedules and transcripts list information on student courses, grades, grade-levels. The names of guardians and addresses were used for identifying family types and census block tracks (both were checked for reliability with survey information). Yearbooks were used to obtain reliable information on students’ voluntary associations in clubs and sports. Yearbook pictures coupled with observation, and school records provided reliable information on race and gender.

Academic and Social Participation

Multilevel regression models were used to predict the rate of task and sociable participation and to distinguish the effects of classroom contexts from individuals’ status characteristics. Rates of participation are operationalized as ego-initiated turns at interaction with other persons or groups within the classroom

(out-degree centrality by semester; see Freeman 1979). These acts are observable communications expressed by classroom participants. Rates of participation are commonly used in expectation-states theory as an indicator of the prestige and power order of groups (Cohen and Lotan 1997a) as well as an indicator of dominance (James and Drakich 1993; Edelsky 1981).

Two types of participation are analyzed: task and social (or that which pertains to academic and non-academic sociable affairs). Academic participation is defined as those turns of interaction that pertain to the concerns of class tasks (Borgatta and Bales 1953a, 1953b). When teachers give directions or information, make declarations, and elicit comments during tasks, they are viewed as engaged in task-related interactions; similarly, when students discuss, reply, and ask questions while performing academic tasks, they are viewed as engaged in task-related behavior. Of course, students and teachers can engage in other dyadic encounters as well, such as when a teacher assists an individual student or the student solicits the help of a neighbor. As already mentioned, task behaviors can also take socioemotional forms (Ridgeway and Johnson 1990). Examples of this arise when a student complains about a task or when a teacher praises appropriate behaviors.

When socializing, actors engage in a range of different loosely structured activities unrelated to tasks, such as “getting to know one another” (James and Drakich 1993), games or contests (Corsaro 1994; Corsaro and Rizzo 1988; Maynard 1985), teasing (Sanford and Eder 1984; Eder 1991), collaborative storytelling (Eder 1988), and gossip (Eder and Enke 1991; Goodwin 1980), to name but a few. The topics of social interaction frequently refer to adolescents’ lives outside the class, such as sports, dating, jobs, parties, fights, social occasions, TV and movies, music, and generally “fun” or exceptional experiences they had during the day (Sieber 1979). Like task interaction, social interaction can entail socioemotional forms of behavior, such as personal insults and praise.

Rates of participation in tasks and social events are measured as the number of outwardly directed interactions that a student performs in a classroom per hour (as averaged for each semester). ^[7] Note that the unit of analysis is a student within a classroom, not the student’s behavior across classrooms. Also note that rates of participation have a skewed distribution across students and classrooms. Clearly, some

classrooms and students will be far more vocal than others. In order to predict rates of participation, a log transformation is used in predictive models. The log of the rate of participation makes the dependent variable normally distributed so that it acquires more reliable standard errors in statistical models. ^[8] (A more detailed description of variable construction and descriptive statistics for each variable are available from the author.)

Explanatory Variables

The substantive question addressed by this research is: What classroom and student characteristics are associated with what types and rates of participation in classrooms? Four sets of variables are hypothesized to influence classroom behaviors: *status (resources)*; *social opportunities (task structures)*; *political climates (networks)*; and *habit*. Students have different *status resources*, or status characteristics, that enable them to be accepted participants in classroom affairs. A large body of research describes how status characteristics of actors bias perceptions such that unequal levels of competence in tasks are attributed to persons holding such characteristics (Berger, Rosenhoptz, and Zelditch 1980; Cohen and Lotan 1997a). I argue that *diffuse statuses* like race, gender, and socioeconomic class get translated into more *specific statuses* within social settings like classrooms. The logic here is that students with higher status ranking (whether diffuse or specific) will be viewed as more legitimate participants and will be afforded greater rights to discourse. Some of this work even suggests that physical attractiveness acts as a diffuse status characteristic affecting the expectations attributed to actors in tasks (Patzner 1985; Webster and Driskell 1983). In this analysis, certain measures refer to *diffuse statuses* acquired in and across various domains of social life. Diffuse status characteristics are measured by the student's *racial background* (minority for Magnet High), *urban/rural residence* (for River High), *gender* (female), *maturity level* (grade-level), *type of family* (traditional nuclear family or not; see Astone and McLanahan 1991), the family's *occupational status*, and the student's *physical attractiveness*. ^[9]

Diffuse status characteristics are the most abstract characteristics of a student and have societal-level referents. A more specific status characteristic pertains to the student's standing within the school. For

example, a student's *academic standing in the school* is defined by grade-point average (akin to class rankings). Students enter classes with cumulative grade-point averages and class rankings that define an academic biography and rank-position in relation to their peers. Those with high GPAs and rankings are generally known as good students, and such characterizations may lead them to perform well across all classes, regardless of the classroom context. This measure was developed as a relative GPA-rank within each school.

Academic status is one characteristic that might increase academic participation, but popularity among peers may have a different effect altogether (Gordon 1957; Coleman 1961a; Bidwell 1965; Cusick 1973). Certain students enter classrooms as highly regarded in the school and are generally more sought after as friends than other students. One can hypothesize that prominence in the school gives students greater self-esteem and willingness to participate in every class setting. The measure for *popularity in the school* is the number of selections a student received as a friend outside of school. [\[10\]](#)

Just because someone is highly regarded in school does not mean he or she will be well regarded in a particular classroom setting. A classroom may be composed of twenty thespians and one externally popular cheerleader whom the thespians intensely dislike. In such a setting, popularity in the school carries little weight. There is a third level of status specificity that is distinct from societal and school levels—*local status in the classroom* (Cohen and Lotan 1997a). Status in the classroom setting depends in part on the external statuses students possess in society and the school, but they are also highly defined by the composition of the class and events that arise within the classroom itself. As status becomes more specific, its value is more constructed by the local context and emergent processes therein. [\[11\]](#)

Local academic status is the relative academic rank a student possesses in a class. Similarly, *local social status* is the relative popularity rank a student possesses in a class. Status in the school and status in the classroom differ. [\[12\]](#) For example, when everyone in a class gets a D except for one student who gets a C, then that individual student's local academic status is relatively high, but his or her academic status in the school is relatively low (assuming the student has a C average). By differentiating classroom status from

school status it is possible to test whether school or classroom standing brings the student the most legitimacy as a dominant player in academic or social affairs. Moreover, including both levels of status reveals the effect of being popular in school net of being popular in class. Similarly, for academic status we can discern the effect of being a good student in school net of being a good student in class. ^[13] By distinguishing status characteristics by such levels of specificity, we can determine which status characteristics are salient and how they are used. The basic idea of status resources, whether diffuse or locally specific, and whether translated or emergent, is that they enable actors to take advantage of the classroom social context.

Even though participants have different status resources at their discretion, they are influenced by the definition of the classroom situation that makes those resources more or less salient. In particular, the *social opportunities* of tasks and the *political climate* of student friendships create a context wherein greater or lesser amounts of participation occur. These characteristics of the classroom setting have uniform effects on learning experiences and are therefore classroom-level phenomena. ^[14] Social opportunities to take the floor are partly determined by the *instructional format* used (Doyle 1986). Student-centered activities demand more active participation in tasks, while loosely-controlled or hard-to-monitor activities allow more play-like behaviors to persist in the setting. These rules of access and levels of monitoring are presented equally to all participants of a classroom activity. Repeated use of certain activities leads actors to expect certain social opportunities and norms of appropriate behavior.

Social opportunities are defined by the proportion of time classes spend in more centralized formats of instruction (Metz 1978; Bossert 1977; Doyle 1986; Stodolsky 1988). These controlled activities consist of lectures, recitation, films, and exams. During such segments, access to peers and the public stage is very constrained. Other activities also entail controlled behaviors, but are more loosely monitored, such as seatwork. There, student behavior is partly contained but given some degree of freedom in most settings such that neighbors can quietly talk with each other. Given that these types of instructional formats constrain interaction, I constructed a measure of *teacher-controlled instruction*: $\text{Teacher-controlled} = \text{Lecture} + \text{Recitation} + \text{Films} + \text{Exams} + (.5) * (\text{Seatwork})$ that was designed to capture task constraints on

access to public discourse. [\[15\]](#)

Unfortunately, giving students the social opportunity to interact does not always result in greater participation (Stein, Grover, and Henningsen 1996). A teacher may use the same format all day, but each class reacts somewhat differently, with one taking advantage of such opportunities more readily than another. Within classrooms, *the pattern of friendship relations* defines the political climate in which students interact (Diani 1996). If friendships become more densely interwoven and feelings of positive sentiment are evenly distributed, then the classroom climate will be more friendly and allow more students to take advantage of social opportunities without fear of reprimand or ridicule (Giordano 1995; Fischer 1977). [\[16\]](#) If friendships are sparse and centralized, then the climate will seem somewhat unfriendly and more uncertain to participants, thereby discouraging participation except for select individuals. The mobilization potential, or the participation capacity of a classroom, is thus partly a function of the overall shape of the informal social network (DiMaggio 1992). A diffuse or centralized relational structure can block collective participation, while a densely interwoven and egalitarian structure can facilitate it.

The mobilization potential of a classroom network is operationalized as the linear combination of the *density* of classroom friendships and the *spread* of positive sentiments. The density of a network is measured by the total number of friendship ties divided by the number possible. The spread of positive sentiments is calculated as one minus the gini coefficient for student centralities in a classroom (i.e., indegree centrality; see Freeman 1979). The gini coefficient is a measure of inequality by distribution and frequency ranging in value from 0 to 1 (McFarland 1999; Plank 2000). Subtracting it from one provides a measure of status equality. These two variables are combined (*friendly classroom relations* = density + (1 - gini indegree)), [\[17\]](#) and thereby capture the extent to which an informal friendship network is interconnected and equal.

Distinct from status but relevant to social standing is the density of friendships a student experiences within the classroom (Borgatti, Everett, and Freeman 1999). This notion of *egocentric density* is somewhat different from the friendliness of a classroom setting as it pertains to the local relational set of a particular

student. As more of a student's friends select each other as friends, the ego becomes more situated in a tight clique where norms and behaviors are reinforced. These closed local networks can place demands on the ego to recognize and cater to his or her friends. It is expected that dense egocentric networks will hinder task participation and facilitate sociable participation, net of the classroom's political climate.

A final social mechanism salient to participation concerns *habit*. The inertia or stability in presentations of self, or the tendency of prior action to reinforce similar future behavior is often overlooked in current sociological research (Mead 1934). However, Mead and other early pragmatists regard habituation as a central mechanism guiding much of human behavior. This work suggests that past patterns of interaction will become routine and that the actor will often behave on "autopilot." A simple measure for first semester rates of task and sociable participation is used as a control in the longitudinal models thereby ascertaining the effect of past behaviors.

Multilevel Framework

This chapter employs a multilevel framework to predict rates of student participation in task and sociable affairs (Bryk and Raudenbush 1992; Frank 1998). A multilevel framework not only fits the substantive question, it fits the data structure and overcomes biases that would occur in typical OLS analysis. Participation is nested within students and classrooms, so a multilevel framework is appropriate. Standard regression analysis is not an adequate method because it assumes coefficients are fixed between groups and that error terms are uncorrelated. To achieve unbiased parameter estimates, I developed multilevel regression models using SAS statistical software (see Littell et al. 1996; Singer 1998). ^[18] A two-level model overcomes aggregation bias and mis-estimation of standard errors common to traditional OLS analysis and helps to accurately discern group-level (classroom level) and individual-level (student by classroom level) effects on task and social participation in classes. I report estimates of the effects of classroom characteristics on the log-transformed rate of participation, controlling for a number of independent variables. For these estimates, I specified a two-level, random intercept model where level two consists of classrooms and level one consists of students in classrooms:

$$\log (y_{ij} + 1) = b_{0j} + b_1x_{ij1} + b_2x_{ij2} + \dots + b_{kj}x_{ijk} + e_{ij} \quad (1)$$

$$b_{0j} = g_{00} + g_{01}(\text{classroom characteristic}) + \dots + d_{01}. \quad (2)$$

Instead of treating b_{0j} as representing a set of fixed constants, I assumed that each b_{0j} is a random variable with a specified probability distribution.

In sum, multilevel regression models predict whether characteristics of status (be they diffuse or at the school or class level) and classroom organizational characteristics (the social opportunities of prescribed tasks and political climates of informal networks) are associated with heightened participation in task and social affairs of classrooms.

Results

The first set of analyses ascertains whether the variance in task and social participation can be explained by classroom characteristics as distinct from individual properties. By partitioning the variance within and between classrooms, it is possible to demonstrate the proportion of variance in participation attributable to individual or contextual characteristics (Sampson, Morenoff, and Earls 1999).

The variance decomposition is illustrated in Table 11.2 for an unconditional model of first and second semester participation. Intraclass correlations reveal the proportion of total variance explained between classrooms. [\[19\]](#) In every model, the variance in rates of participation (first semester, second semester, and net increase) is substantially attributed to classroom-level variation. Anywhere between 6 and 30 percent of the total variation in participation can be attributed to classroom characteristics. In short, student participation is only partly influenced by characteristics of students and their particular situations.

[Insert Table 11.2 about here]

Tables 11.3 through 11.6 present results of multilevel regression models. Table 11.3 and 11.5 present cross-sectional results for the first semester, or the factors initially associated with higher rates of task and sociable forms of participation. Tables 11.4 and 11.6 present longitudinal results, or factors

associated with increased rates of task and sociable participation in classrooms.^[20] As such, the tables reveal initial associations and then slopes for growth. Within each table standardized coefficients are listed to allow for comparison of the magnitude of effects across different variables.^[21]

[Insert Tables 11.3-11.6 about here]

Background Effects

Several general findings emerge from the results in Tables 11.3 through 11.6. The first set concerns the effects of student background and diffuse status characteristics on participation. In general, students' diffuse status characteristics play a larger role in sociable interactions than task interactions. In Tables 11.3 and 11.4 background variables fail to significantly improve the models of task participation. Surprisingly, minority race at Magnet and family structure more generally have no significant effect on classroom behaviors. However, there are significant effects of diffuse status characteristics for place of residence, gender, occupational status, and physical attractiveness.

River High students start the year less vocal in task and sociable affairs than Magnet youth, but then their growth in participation is at a steeper rate than Magnet students over the course of the year. The rate of growth in River's participation is not steep enough to catch up to the initial advantage Magnet students have, but it is worth remarking why the schools differ in this way. Magnet High contains smaller cohorts of students who take more of the same classes than River students. Hence, many know each other at the start of the year while at River classes often start out with a lot of strangers.^[22] When the school year commences, River students are uncertain of their surroundings and are more cautious when participating than their Magnet peers. As the year gets going, however, acquaintances become friends and River students start to interact more.

Even though gender has no association with initial rates of task participation, males tend to become slightly more vocal in tasks over the course of the school year. Much of the literature on gender and dominance suggests that boys will be more vocal in tasks (Ridgeway and Dikema 1989; Lockheed, Harris,

and Nemceff 1983), and perhaps more so second semester after social ties and classroom norms have been learned (McFarland 2001). After students “learn the ropes” or understand the rules of the game they are more inclined to adopt learned strategies of action that fit their individual dispositions (e.g., boys become more aggressive). Why this does not also arise for sociable participation is unclear and requires further analysis.

Interestingly, students who did not provide information on their parents’ occupational status are less involved in tasks and sociable affairs over time. Moreover, this effect occurs net of their absences, so it suggests they lessen their participation even when they do show up for class. These students did not provide complete survey responses because they attended class less and less often as the year progressed. Due to their absence, their membership in the setting and familiarity with daily affairs diminished, and in turn, so did their efforts to participate.

Students with parents of higher occupational status tend to become more sociable as the year progresses. These are wealthier students who can afford nice clothes, the “in” haircut, a car, and even money for social events. Much of the literature on social crowds makes much of social class distinctions in relation to the adolescent world, so it is of little surprise here (Brown 1986, 1989; Eckert 1989; Kinney 1993; Canaan 1987). Since these resources are more salient to the adolescent society than formal tasks, it makes sense that they encourage sociability.

In comparison to other diffuse status characteristics, physical attractiveness is the most salient to classroom affairs. Physical attractiveness is especially associated with sociable behavior and increased involvement in play-like endeavors. Students who are physically attractive have a status resource that enables them to enter conversations (as attractive) and defuse tense situations they encounter (e.g., translating them from task to flirting routines). The relevance of physical attractiveness and sexuality to adolescent relations and adolescent-adult interaction is no surprise to most anyone who observes American secondary schools (Webster and Driskell 1983).

School and Classroom Standing

By themselves, background characteristics do not afford the best model of task and sociable

participation (see chi-square tests). Local status positions in the school and classroom greatly define who can and cannot take a dominant part in academic and sociable affairs of classrooms. A student's academic and sociable standing in the classroom plays an important role in defining initial access to discourse.^[23] In particular, popular students in the class are more vocal in both work and play routines in the first semester. As such, popularity is a versatile resource that enables the youth to enter any public stage that arises in the setting. In contrast, high academic standing in the class inhibits a student's access to play activities around them.^[24]

Over time, being a good student in the school (high GPA rank) has a greater relation to increased task participation than merely being a good student in that specific classroom setting. Academic standing in the school becomes more relevant over time as teachers and peers learn of students' academic reputations. While it is true that students do achieve at similar levels across school years, teachers initially know very little about a student's past performance. By second semester, general expectations are established and are transferred across particular settings. Local perceptions of ability, focus, and performance are salient first semester, but by second semester, the GPA rank of a student is more established as a salient status characteristic.

Accompanying the effect of GPA rank in the school is the effect of local social standing in the classroom. Locally popular kids, not "big men on campus" or "homecoming queens," are more likely to engage in tasks and social activities. This seems like an odd result since GPA rank in the school is more related to task participation than local academic standing. Why is popularity in the school less relevant to task and social dominance than local social status in the classroom? GPA rank is more salient because it is a standardized measure that can be transposed across settings for use. Teachers and students of one class know just as well as those in another what an 'A' means. In contrast, there is little consensus on which social crowds are liked and disliked within the adolescent society. Therefore, local peer support is more salient to task and social participation than popularity in the school.

A final characteristic of students' individual situations concerns the actor's social network. The density of an egocentric network has an interesting relation to participation and increased dominance in

classroom affairs. Students whose friends are also friends with one another seem to be less participatory in tasks over time and initially more vocal in play activities around them. This effect is thought to arise because dense friendship relations place social demands on students that remain fairly consistent over the course of the year due to the network's closure. A closed social network, however, demands that the student show allegiance to friends, and therefore makes increased participation in competitive tasks undesirable and possibly contradictory to the logic of the group norm (i.e., not to be a rate-buster; see Homans 1950).

Classroom Characteristics

Thus far, I have discussed only the effects of individual characteristics of students and their egocentric situations. However, the fitness of the multilevel regression models significantly improves with the inclusion of two classroom characteristics reflective of the formal and informal organizational contexts that students uniformly encounter in a classroom setting. Results in Tables 11.3 through 11.6 indicate that activity structures are more salient to levels of classroom task participation while the degree of equality and interrelatedness of friendship relations is more salient to sociable affairs—both cross-sectionally and over time. Hence, there is a degree of dimensional specificity. However, the structure of work initially influences play behavior, defining its bounds. Over time, task structures become less salient as students learn to maneuver norms and expectations to socialize in spite of them. Similarly, the structure of informal relations has a causal influence on task behavior over time. Friendly contexts encourage increased interaction, especially after students become familiar with the setting. Overall, the more student centered work routines become, and the more egalitarian and developed friendly classroom relations become, the more vocal a class becomes in general. As work becomes centralized and interpersonal relations become diffuse and centralized, the level of participation diminishes.

Task Participation

Results in causal models (Tables 11.4 and 11.6) show the obvious: Task participation begets task participation and social participation begets social participation. However, the models also show that task

participation can result in increased social participation but not vice versa. This result suggests that tasks act like ice breakers for future socializing. It also suggests that sociable activities become increasingly more vocal and important over the course of the school year.

Results of Tables 11.3 through 11.6 reveal that there is dimensional specificity across relational channels, types of status, and forms of conduct. However, certain relations, statuses, and behaviors can be used to pirate and translate meanings across organizational dimensions. Recounting the main causes of task and sociable behavior clearly tells such a story. Analyses of *task participation* in Tables 11.3 and 11.4 can be summarized as follows:

- Classrooms are more task-vocal when the activities are open and student-centered.
- Individual students are more task-vocal when they are popular among classmates and academically successful in the specific class.
- Classrooms grow increasingly vocal in tasks when work routines are student-centered and classroom relations are dense and egalitarian.
- Individual students grow increasingly vocal in tasks when they have high GPA's and have been task-vocal in the past. In addition, they grow increasingly vocal in tasks when they are attractive and popular among classmates and unhindered by membership in a dense friendship clique.

Taken as a whole, these results reveal a larger story. First, context matters greatly for high rates of task participation. Student-centered instructional formats and dense egalitarian friendships enable students to be more vocal in tasks, especially as the year progresses. Second, particular status resources enable students to participate in tasks. 'A' students and popular students in the classroom are more vocal in tasks and become increasingly so over time. In particular, good academic standing in the school generates greater task participation, most likely because youth identify and attach themselves to the roles to which they excel. However, locally popular students are more vocal at the start of the school year (model 3, $b^* = .20$), and they become increasingly so at a rate approaching that of GPA rank (see Table 11.4). Most of these results are straightforward, but the surprising finding is that the informal organization of social relations and

social standing therein affects the vitality of formal classroom affairs net of formal organizational characteristics and academic forms of status. Thus, while there is dimensional specificity (i.e., task structures and academic standing affect rates of task participation), there is also interdimensional causation where characteristics of adolescents' social lives permeate and influence academic affairs.

Social Participation

Analyses of *social participation* in Tables 11.5 and 11.6 can be summarized as follows:

- Classrooms are more sociable when tasks are student-centered and entail developed classroom networks.
- Individual students are more sociable when they are physically attractive, popular among classmates, and have dense personal friendship relations in the class, but not when they are academically successful.
- Classrooms grow increasingly sociable if classroom relations are dense and egalitarian.
- Individual students grow increasingly sociable when they are physically attractive, popular among classmates, and have been socially and academically vocal in the past.

Taken as a whole, the results for sociable participation also reveal a larger story. Like task behavior, social behavior is highly influenced by characteristics of the classroom context. Instructional formats only influence play at the start of the year, while the overall quality of the classroom friendship network encourages high rates of play early on and causes sociable behavior to grow increasingly vocal as the year progresses. Second, particular status resources enable students to participate in play routines around them, while others inhibit such participation. Popular students with dense friendships find many opportunities for sociable interactions. However, academically astute youth find there are barriers or incentives not to participate in these interactions. There is to some extent a "status-barrier," which suggests a unidirectional translation of status into participation. Peer status legitimates the student as a participant in academic affairs, but academic status mildly de-legitimizes the student in sociable activities.

From the results, one can conclude that conduct in formal and informal organizational dimensions is

facilitated by certain classroom and individual characteristics. To participate in tasks successfully, mainly requires access to the floor and legitimacy as a good student (achievement logic). To participate in social affairs successfully, primarily requires a context of dense friendship ties and legitimacy as a “likeable guy or gal.” Results suggest that social and academic forms of interaction have distinct causal anchors and that the formal and informal organization of classrooms have recognizable boundaries.

At the same time, these results reveal that certain relations and status characteristics can translate across formal and informal organizational boundaries. Task participation arises not only from formal organizational characteristics of academic status, but from social standing in the classroom and the nature of friendship relations in the setting. The formal organization of instruction and learning is altered by the context of informal relations and adolescent conceptions of informal status. This *interdimensional* effect nearly equals that occurring within the formal organizational dimension of task structures and academic definitions of status. In contrast, social participation arises almost exclusively from friendship relations and peer status. The organization of tasks has a mild association with social behavior, but only when the tasks are difficult to monitor, thereby enabling the social world of adolescents to pour forth into classroom affairs. Therefore, the results indicate that the social world permeates formal work routines while the academic world only serves as an avenue to sociable interactions where academic values are shunned and seldom brought to bear.

Conclusion

The answer to the initial research question—What makes some classes and students more academically and/or sociably vocal than others?—should be clear. Some classes are more vocal than others because they have students with friendly interpersonal relations who are given the opportunity to interact with one another via group work and discussion. ^[25] Moreover, some students are more vocal than others because they have various status resources that make them legitimate participants in various classroom endeavors. In general, status characteristics have greater dimensional specificity than classroom

characteristics. However, social standing among classmates and physical attractiveness afford legitimacy in both work and play activities. In contrast, academic status appears to have relevance only for academic affairs and even acts as a mild “stigma” in social activities. Last, student participation is greatly defined by past levels of participation. However, this too has a degree of dimensional specificity. Sociable play-interactions do not lead to greater work involvement, but task interactions do become a basis for future play interactions. As such, classroom participation is characterized by behavioral drift from work to play affairs over time. In short, formal and informal organization have a degree of boundary definition, but the pattern of translation is such that the informal world of adolescents permeates and somewhat supplants the work routines in high school classrooms.

The policy implications of this paper are somewhat limited as it concerns only a sample of thirty-six classrooms from two high schools. Nevertheless, certain hypotheses about classroom organization are suggested by this work. First, opening up task structures not only increases task participation but social participation unrelated to work. However, the opposite strategy is possibly more problematic. Closing task structures inhibits task participation more over time than sociable participation. That is, students will eventually socialize even though the tasks may not allow it. Second, a friendly classroom setting encourages sociable interactions and the digression of tasks into play routines. Some treatment or prescribed organization of adolescent relations may prove to have great returns on active involvement in tasks. Friendliness among students is not a bad thing per se, but it can become one if left undirected and unmanaged. Third, this research makes status treatments seem more relevant than ever, regardless of the type of activity structure used (McFarland 2001). In particular, the main treatment needs to be peer status, as it has the greatest sway over classroom discourse in general. Popular youth appear to be loci of interaction in classrooms. Whether these students need to be co-opted (McFarland 2003) or circumvented (Cohen and Lotan 1997a) is still a point of debate. Removing popular students from the class often serves to undermine processes of mobilization and consensus among adolescents. Last, further research is needed to explain why academic and peer status are uncorrelated in middle school and high school but positively associated in grade school (Lloyd and Cohen 1999; Chiu 2000). Why does this divergence of academic and social worlds arise?

This chapter has also tried to make a theoretical contribution to sociology and the sociology of education, weaving together status characteristics theory and micro-organizational theory in an effort to explain the different forms and variations of classroom conduct. Status characteristics were regarded as political resources that conferred a degree of legitimacy on the adolescent actors (Berger et al. 1980). Micro-organizational theory helped describe relational channels and activities that uniformly affected all actors in the setting, thereby creating opportunities and constraints that affected overall levels of classroom participation (Roethlisberger and Dickson 1939; Homans 1950). The end product is the extension of status characteristics theory ^[26] and a revival of old institutionalist theories that described the behaviors and interactions associated with an organization's technical core. Both are relevant to the development of a social psychology of schooling and the study of classrooms that Bidwell's (2000, 2001) most recent work encourages sociologists of education to study.

Table 11.1a. Cross-Classification of Organizational Contexts with Types of Conduct

<u>Types of Conduct</u>	<u>Organizational Contexts (Relational Channels)</u>	
	<i>Formal/Prescribed</i>	<i>Informal/Emergent</i>
<i>Task /Work</i>	Formal relations used in work Ex: staying within prescribed channels to get work done (e.g., following task rules)	Informal relations used in work Ex: going outside prescribed channels to get work done (e.g., using friends)
<i>Sociable/Play</i>	Formal relations used in play Ex: staying within prescribed channels to socialize about topics unrelated to work	Informal relations used in play Ex: going outside prescribed channels to socialize about topics unrelated to work

Table 11.1b. Cross-Classification of Types of Status with Types of Conduct

Types of Status

(Political Resources)

<u>Types of Conduct</u>	<i>Academic Status</i>	<i>Peer Status</i>
<i>Task /Work</i>	Academic status salient in work Ex: Formal leader dominates work	Peer status salient in work Ex: Informal leader dominates work
<i>Sociable/Play</i>	Academic status salient in play Ex: Formal leader dominates play	Peer status salient in play Ex: Informal leader dominates play

Table 11.2. Decomposition of Variance for Task and Social Participation

Variance Components	First Semester	Second Semester	Second Semester Net of First
<i>Task Participation</i>			
Classroom Level Variance τ_{00}	.14	.14	.06
Individual-Level Variance σ^2	.39		.42
Intraclass Correlation ρ	.27	.25	.16
<i>Social Participation</i>			
Classroom Level Variance τ_{00}	.23	.30	.15
Individual-Level Variance σ^2	.62	.61	.44
Intraclass Correlation ρ	.27	.33	.25

NOTE: ρ tells us the proportion of total variance that occurs between classrooms: $\rho = \tau_{00} / (\tau_{00} + \sigma^2)$.

Table 11.3. Cross-Sectional First Semester Models: Multilevel Coefficients from the Regression of First Semester Task Participation (Log) on Selected Predictors

	Model 1	Model 2	Model 3	Model 4
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Explanatory Variables (N=751)	b*	b*	b*	b*
Intercept	... ***	... ***	... ***	... **
Background variables:				
Magnet minority ^a	.04	.05	.05	.05
River town ^a	-.23 **	-.23 **	-.24 **	-.18 *
River rural ^a	-.16 *	-.16 *	-.17 **	-.12
Female gender	.02	.01	.00	.00
Lower grade level	.02	.01	-.01	.00
Nonnuclear family	-.02	-.01	.00	.00
Highest parent occ status	.04	.04	.03	.03
Missing occupational status	.00	.04	.03	.03
Physical attractiveness ^b	.12 ***	.11 **	.06	.06
Standing in school: ^b				
Academic standing in school		.11 **	.08	.07
Social standing in school		.03	-.04	-.04
Standing in class: ^c				
Academic standing in class			.07 *	.07 *
Social standing in class			.20 ***	.20 ***
Density of ego's network			.03	.02
Classroom Characteristics: ^d				
Teacher-controlled instruction				-.17 *
Friendly classroom relations				.14
Likelihood ratio χ^2 vs. ^e				
Null Model (df)	-8 (9) ns	-9 (11) ns	16 (14) ns	23 (16) ns
Prior Model (df)	-8 (9) ns	-1 (2) ns	25 (3) ***	7 (2) *
Log Likelihood	1508.7	1509.3	1484.7	1477.6

Note: $b^* = \beta (s_x / s_y)$. Percent change = $\exp(b^*) - 1$. To get raw data, $b = \exp(b^* (s_x / s_y)) - 1$.

^aMagnet majority is the baseline comparison group for regional variables.

^bThese variables are mean-centered within each school.

^cThese variables are mean-centered within each classroom.

^dClassroom characteristics are level 2 variables with $N = 36$.

^eCompared to model that includes only prior task interaction.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 11.4. Longitudinal Models: Multilevel Coefficients from the Regression of Second Semester Task Participation (Log) on Selected Lagged Predictors

Explanatory Variables (N=467)	Model 1	Model 2	Model 3	Model 4
	b*	b*	b*	b*
Intercept	... ***	... ***	... ***	...
Past participation:				
Task Interaction (log)	.47 ***	.43 ***	.42 ***	.40 ***
Social Interaction (log)	.01	.04	.02	.00
Background variables:				
Magnet minority ^a	.06	.08	.08	.07
River town ^a	-.02	-.01	-.02	.10
River rural ^a	.07	.07	.07	.14 *
Female gender	-.05	-.08 *	-.08 *	-.08 *
Lower grade level	.02	-.01	-.01	.04
Nonnuclear family	.04	.05	.05	.05
Highest parent occ status	.07	.05	.06	.06
Missing occupational status	-.16 ***	-.14 ***	-.13 ***	-.13 ***
Physical attractiveness ^b	.10 *	.09 *	.07	.08 *
Standing in school: ^b				
Academic standing in school		.18 ***	.18 ***	.18 ***
Social standing in school		.08 *	.06	.06
Standing in class: ^c				
Academic standing in class			.01	.00
Social standing in class			.10 *	.10 *
Density of ego's network			-.07 +	-.08 *
Classroom Characteristics: ^d				
Teacher-controlled instruction				-.30 **
Friendly classroom relations				.18 +
Likelihood ratio χ^2 vs. ^e				
Null Model (df)	5 (9) ns	17 (11) *	14 (14) ns	27 (16) *
Prior Model (df)	5 (9) ns	13 (2) **	-4 (3) ns	13 (2) **
Log Likelihood	864.1	851.5	855.1	842.4

Note: $b^* = \beta (s_x / s_y)$. Percent change = $\exp(b^*) - 1$. To get raw data, $b = \exp(b^* (s_x / s_y)) - 1$.

^aMagnet majority is the baseline comparison group for regional variables.

^bThese variables are mean-centered within each school.

^cThese variables are mean-centered within each classroom.

^dClassroom characteristics are level 2 variables with $N = 36$.

^eCompared to model that includes only prior task interaction.

+ $p < .10$ (for classroom level only); * $p < .05$; ** $p < .01$; *** $p < .001$

Table 11.5. Cross-Sectional First Semester Models: Multilevel Coefficients from the Regression of First Semester Social Participation (Log) on Selected Predictors

Explanatory Variables (N=751)	Model 1	Model 2	Model 3	Model 4
	b*	b*	b*	b*
Intercept	... ***	... ***	... ***	...
Background variables:				
Magnet minority ^a	.04	.04	.03	.03
River town ^a	-.19 *	-.18	-.19 *	-.10
River rural ^a	-.14	-.13	-.14 *	-.08
Female gender	.06 *	.07 *	.05	.05
Lower grade level	.08	.07	.02	.03
Nonnuclear family	.04	.04	.05	.06
Highest parent occ status	.04	.05	.04	.04
Missing occupational status	.03	.02	.01	.01
Physical attractiveness ^b	.19 ***	.17 ***	.10 **	.10 **
Standing in school: ^b				
Academic standing in school		-.08 *	-.03	-.04
Social standing in school		.09 *	.00	.00
Standing in class: ^c				
Academic standing in class			-.08 *	-.08 *
Social standing in class			.32 ***	.32 ***
Density of ego's network			.10 **	.09 **
Classroom Characteristics: ^d				
Teacher-controlled instruction				-.17 *
Friendly classroom relations				.25 **
Likelihood ratio χ^2 vs. ^e				
Null Model (df)	23 (9) **	30 (11) **	127 (14) ***	145 (16) ***
Prior Model (df)	23 (9) **	22 (2) ***	96 (3) ***	19 (2) ***
Log Likelihood	1816.6	1809.4	1713.1	1693.9

Note: $b^* = \beta (s_x / s_y)$. Percent change = $\exp(b^*) - 1$. To get raw data, $b = \exp(b^* (s_x / s_y)) - 1$.

^aMagnet majority is the baseline comparison group for regional variables.

^bThese variables are mean-centered within each school.

^cThese variables are mean-centered within each classroom.

^dClassroom characteristics are level 2 variables with $N = 36$.

^eCompared to model that includes only prior task interaction.

* p < .05; ** p < .01; *** p < .001

Table 11.6. Longitudinal Models: Multilevel Coefficients from the Regression of Second Semester Social Participation (Log) on Selected Lagged Predictors

Explanatory Variables (N=467)	Model 1	Model 2	Model 3	Model 4
	b*	b*	b*	b*
Intercept	... ***	... ***	... ***	...
Past participation:				
Social Interaction (log)	.41 ***	.40 ***	.38 ***	.38 ***
Task Interaction (log)	.12 **	.12 **	.11 *	.10 *
Background variables:				
Magnet minority ^a	.00	.01	.01	.01
River town ^a	-.07	-.06	-.07	.00
River rural ^a	.11	.12	.11	.16 *
Female gender	.00	.00	.00	.00
Lower grade level	.02	.00	.00	.04
Nonnuclear family	.06	.06	.06	.06
Highest parent occ status	.07 *	.08 *	.09 **	.09 **
Missing occupational status	-.11 ***	-.11 **	-.10 **	-.10 **
Physical attractiveness ^b	.15 ***	.13 ***	.12 ***	.12 ***
Standing in school: ^b				
Academic standing in school		-.02	-.03	-.04
Social standing in school		.10 **	.07 *	.07 *
Standing in class: ^c				
Academic standing in class			.03	.03
Social standing in class			.09 **	.09 **
Density of ego's network			-.04	-.05
Classroom Characteristics: ^d				
Teacher-controlled instruction				-.15
Friendly classroom relations				.22 *
Likelihood ratio χ^2 vs. ^e				
Null Model (df)	30 (9) ***	28 (11) **	24 (14) *	33 (16) **
Prior Model (df)	30 (9) ***	-2 (2) ns	-4 (3) ns	9 (2) *
Log Likelihood	959.1	961.3	964.9	955.9

Note: $b^* = \beta (s_x / s_y)$. Percent change = $\exp(b^*) - 1$. To get raw data, $b = \exp(b^* (s_x / s_y)) - 1$.^aMagnet majority is the baseline comparison group for regional variables.^bThese variables are mean-centered within each school.

^cThese variables are mean-centered within each classroom.

^dClassroom characteristics are level 2 variables with $N = 36$.

^eCompared to model that includes only prior task interaction.

* $p < .05$; ** $p < .01$; *** $p < .001$

Endnotes

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[2] The study of behavioral dominance is important because it furthers our understanding of how social structures form. Through acts of dominance, situations get defined for others, relational patterns get established, and hierarchies form such that fixed patterns of deference get played out (Chase 1974; 1980; de Waal 1982; Ridgeway and Berger 1986).

[3] For other arguments on youth opposition see Eisenstadt (1956). For a similar argument on the divergence of formal and informal relations in high schools, see Gordon (1957).

[4] Academic status and peer status are measured as rankings within the classroom. Students are asked who receives the best grades and who is the most popular. The researcher then sums the number of selections each student receives. Students in each classroom are then sorted into quintiles, thereby creating an ordinal rank out of the numbers of selections students receive. Students in higher quintiles are viewed as having status characteristics enabling them to be more dominant participants in tasks (Cohen and Lotan 1997a).

[5] Natural observations in classrooms and elsewhere find that organizational habitus and local culture is defined as somewhat distinct from societal definitions of habitus and culture (Hollingshead 1949; Fine

1987; Cohen and Lotan 1997a; McDonough 1997; Lloyd and Cohen 1999; Chiu 2000).

[6] The friends nominated on general and setting-specific forms are correlated but not multicollinear (.38). Many of the friends listed in class are not friends the student hangs out with outside of school (Please cite). These friends were therefore quite different from the “fair weather” friends that many students had in class.

[7] Mehan (1979) finds that some utterances by teachers and students are indirect and aimed at the entire class. Rendering the dependent variable a rate of outwardly directed utterances makes indirect and direct utterances equivocal. I started with sociolinguistic coding of sequences of interaction within classrooms (like Mehan 1979). I then made a series of reasonable abstractions to acquire count-data that were rendered as rate per hour (akin to the “process-product” tradition). I thus acquired a measure of participation that was more useful for predictive analyses. Granted, a great deal of rich detail is lost in the process of abstraction, but there is a payoff. This type of work informs sociolinguistics with regard to central tendencies and patterns of interaction that occur at a more abstract level.

[8] Some actors are non-vocal. Since taking the log of 0 affords negative values, I log the rate of interaction + 1.

[9] Physical attractiveness is considered a diffuse status characteristic (Webster and Driskell 1983). In this study, I evaluated the physical attractiveness of students on a 4-point scale. In an effort to assess the reliability of my observations, I asked fifteen college students and professors of differing genders and ages to evaluate the attractiveness of 42 different students in a yearbook. The average correlation of evaluations was .60; for my own coding, the average correlation was .68. The reliability is not ideal (.90 is), but the respondents had not seen the students in person so that they could not discern height, curves, etc., from yearbook pictures. I did check to see if results changed when the variable was omitted. The only significant change is that highest occupational status is slightly more significant in the results of model 1 and 2 of each table. Parents’ highest occupational status approaches significance, probably because family status translates into attractiveness via clothes, haircuts, beauty aids, etc.

[10] It was initially thought that track placement and extracurricular involvement would matter for

participation (following Oakes, Gamoran, and Page 1992; McNeal 1995). However, no such effect was found. In the interest of parsimony, these controls were removed.

[11] Cohen also finds that classroom-specific statuses are not fully attributable to diffuse statuses of class, gender, and race (Cohen 1994; Cohen and Lotan 1997a). Similar findings of the non-reducibility of types of status have been developed (Hollingshead 1949; Fine 1987; McDonough 1997).

[12] Measures for relative academic rank and relative popularity rank were developed from instruments administered to specific classrooms, and not from the same instruments measuring academic and social standing in the school. Relative popularity rank and school popularity are measured in similar ways, but are based on different questionnaires using different survey items. Relative academic rank is not a relative grade rank in the class; it is a composite score based on the teacher's perception of the student's ability, on-task behavior, and likely grade at semester's end. As such, it measures the teacher's perception of the quality of the student.

[13] Academic standing in the class and academic standing in the school are correlated at .52 but not multicollinear.

[14] Given my limited sample of classrooms (36 to 25), only a couple of classroom-level variables could be used simultaneously in the predictive models. However, by using a two-level model, I control for the effects of the classroom level on participation rates even though I may not have measured every variable. The two-level model is ultimately more accurate than regular OLS. Measures of model fitness confirm this as well.

This study tested multiple classroom variables to see which had the most significant effect on participation in class. Tests were performed to see if class size, honors labeling, math subjects, and open instructional formats affected participation rates. Only network density, class size, and instructional formats conducive to task or social participation had consistent significant effects. Class size was found non-significant when used in concert with the other variables and was therefore omitted. Its omission did not alter the sign, and only slightly increased the significance of density in predictions of social participation. In general, as class

size increased, rates of participation went down since fewer students could gain access to the floor (Becker et al. 1973).

[15] Less teacher-controlled formats include group work, transitions, maintenance routines, and free time.

[16] Such opportunities are defined by the social support a student acquires relative to others in the class. When support is common and equal relative to others in the setting, the political opportunities are high.

[17] Another reason to add the term *1 minus the gini coefficient* is that density was highly associated with class size (small classes being more dense). In an effort to define network effects as distinct from class size, the density and equality of tie distribution was seen as affording the best measures of trust and rights to discourse.

[18] The SAS PROC MIXED procedure was used. The syntax is available from the author.

[19] One way to think about the sources of variation in increased rates of participation is to estimate the intraclass correlation, r . This is equivalent to expressing the variance-covariance matrix in correlation form. For first semester, task participation: $r = t_{00} / (t_{00} + s^2) = .14 / (.14 + .39) = .27$.

[20] Heckman sample selection tests were performed to see if the longitudinal subsample was significantly different from the larger cross-sectional first semester sample. While the probit model found the smaller sample to be composed of more Magnet students and more honors students than the first semester sample, no significant effect was found for the Inverse Mills Ratio on any outcome variable used in the results section (at $p < .10$ level). A greater number of honors classes are in the longitudinal sample than the cross-sectional sample because honors classes are more likely to be year-long courses than are other courses.

[21] Standardized coefficients of $b^* = B (s_x / s_y)$ where B is the raw coefficient and s is the standard deviation (level specific). Interpreting the effects of each standardized variable requires further transformation since the dependent variables are log transformed. Looking ahead to Table 11.3, model 5, one sees that first semester task participation is significantly associated with teacher-controlled instruction ($b^* = -.17$). By transforming the raw result ($\exp(x) - 1 = \exp(-.17) - 1 = -.16\%$), I undo the log-

transformation and learn the percent decline in task participation that results with a one standard deviation increase in the use of teacher-centered tasks. A one standard deviation increase in teacher-controlled instruction translates into a 16 percent decrease in task participation.

[22] I should also add that River Rural students are at an even greater disadvantage. They come from outlying areas and attend smaller middle schools. Upon entering River High, they are at a network disadvantage from their River Town counterparts. Compared to students of River Town, rural residents start out slightly quieter and have the greatest gains of participation over the year because they are the most likely to develop new friendships.

[23] The regression models in Tables 11.3 through 11.6 do not reveal the manner in which diffuse statuses and school status effects on participation translate into local classroom status effects on participation. A series of multiple regressions were performed to determine the direct and indirect effects of diffuse statuses and school status variables. Few diffuse status variables have direct effects on participation (besides attractiveness and occupational status). Some diffuse statuses translated mildly into school standing. Parents' occupational status and family background affect students' GPA ranking. And occupational status affects students' physical appearance (income can be used to buy clothes, etc). Appearance, in turn, affects popularity in the school and class (very mildly). More substantial were the effects that school standing had on classroom standing. Popularity in the school affects popularity in the class (correlation .38), and GPA ranking affects academic rank in a class (correlation at .52, but not significantly multicollinear in tests of each model). Status in the school to some extent explains the strong effect of status in the classroom. However, in longitudinal models of task participation, the direct effects of academic rank in the school tend to eclipse local academic rank in a class, while the inverse holds true for the relation of social statuses to social participation.

[24] The interaction of academic standing in the school with academic standing in the classroom has a significant positive effect, suggesting these statuses have a compounding effect. The interaction is less substantial than the additive effects, however, so it was not included in the results.

[25] I tested interactions of classroom characteristics and found they have additive effects, not compounding effects. It is not an either/or story with regard to volume of discourse.

[26] The scope of status characteristics theory has been expanded in several ways. By analyzing classrooms, the theory has been applied to natural settings. By using a variety of task structures, the theory has been extended beyond collaborative group situations. And last, by predicting sociable participation, status characteristics theory has been used to explain behaviors emblematic of informal organization.