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**ABSTRACT**

No investigation has directly conceptualized or measured student engagement in secondary schools. Rather it must be inferred elliptically from other investigations of students who disengage, dropout, or are alienated. Engagement has been defined as existing when students are participating in the activities offered as a part of the school program; disengagement as the extent to which students refrain from participating in school activities. A conceptual framework of engagement includes the following: (1) engagement is the attitude leading to and participation in the school's programs; (2) engagement has multiple interactive determinants; (3) engagement will have an impact on many student and school outcomes including achievement, academic knowledge, and social behavior; and (4) research on engagement should be longitudinal rather than cross-sectional. Psychological characteristics of the student, family characteristics, school characteristics, and teacher characteristics affect student engagement. Engagement has no real theory, direct assessment tools, nor systematic research. Clearly a student's engagement in his schooling can be a complex state of perception or a way of acting. Many of its antecedents are deeply rooted in the larger society, the family, and in the school and classroom. In this sense much of engagement seems immutable. Yet, there are identifiable characteristics of schooling that, if varied, can result in enhanced participation. (ABL)

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Assessing Student Engagement  
in Secondary Schools:  
Alternative Conceptions, Strategies  
of Assessing, and Instruments

A Resource Paper for The  
University of Wisconsin  
Research and Development Center

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Student Engagement in Secondary Schools:  
Alternative Conceptions, Strategies and Instruments

Introduction

The charge to the authors of this paper was set by the title. How have investigators conceptualized students' "engagement" in high school, how have they measured it, and what are the findings? More particularly, are there psychological characteristics which differentiate adolescents in terms of their engagement with school?

We begin this report with a somewhat surprising and, we suppose, disappointing observation. No investigation, to the best of our knowledge, has directly conceptualized or measured student engagement in secondary schools. "Engagement" per se is rarely even mentioned, we found two actual uses of the term in our review of the literature. Rather it must be inferred eliptically from other investigations - of students who "disengage", drop out, or are "alienated" as examples. Peviewing the presumably pertinent literature has been like looking for the proverbial needle in a haystack. We've pulled apart several haystacks finding in the process much straw and chaff, some threads, but no needle. Our conclusion is that "it" (definitive conceptions or means of assessing engagement) is not there.

What is available are many articles, a number of monographs and research studies which can be related logically to the elusive concept of student engagement and its measurement. This report will organize this welter of secondary sources into a relatively complex model of student engagement and its assessment. But the educator interested in definitive or developed maps of engagement faces a task not dissimilar to that confronting Lindberg in

crossing the Atlantic. He must fly largely by the seat of his pants while looking in a mirror reflecting many fog-obscured objects which may or may not be landmarks along the way to LeBourget.

Anderson (1982) concludes a long review of "school climate" research with: "The need now is for conceptually based research aimed at improving models of school climate effects rather than merely adding to the long list of separate variables or reaffirming their association with climate or outcomes" (p. 412). Educators interested in why teen-agers participate actively in their high school programs might wish that the research base for engagement "enjoyed" similar state-of-the-art problems.

#### In Search of Student Engagement: Alternative Conceptions and Instruments

We now turn to the literature that does exist. We have said that we have reviewed many studies which suggest logical correlates of engagement. In the absence of an elephant, the reports of the nine blind men will have to do. We begin with several more encompassing reports - conceptualizing the causes (actually correlates) of student disengagement and dropping out. We then propose a broad conceptual model of student engagement. It has at least the aesthetic, heuristic value of organizing a welter of ad hoc studies. (Simply an exhaustive article-by-article review of the research covered seems of little use to anyone.) By creating an encompassing model of engagement and ordering many independent variables and studies to it, the hope is to help the reader make as much conceptual and assessment sense as possible of largely uncharted terrain.

Natriello (1984), at John Hopkins, is one of only two of the many investigators reviewed actually to use the terms student "engagement" and "disengagement". He says: "Engagement exists when students are participating in the activities offered as part of the school program . . . disengagement may

be defined as the extent to which students refrain from participating in the activities offered as part of the school program" (p. 14). Appearing to view engagement and disengagement as opposite ends of a continuum, Natriello focuses his attention primarily on the latter. Nevertheless, his formulation of the phenomenon is instructive.

Natriello argues that disengagement manifests itself in three pressing problems for the American high school: absenteeism, apathy or low-level participation in school, and delinquency, either in the form of violence or vandalism. He cites statistics to support the severity of all three problems: a) Two million students regularly cut school. b) A 1975 finding (Massey, Scott, and Dorbusch, 1975) that fewer than 45% of the white students in the particular study reported a high level of effort in school, a proportion higher, however, than that for black or Spanish surnamed students (a pattern used to account for the poor academic performance of minority students). c) He also cites alarming statistics on the amount of violence, real or threatened, experienced in American secondary schools.

Natriello suggests that studies of disengagement have looked at at least five independent variables: student "origins", including personality; school policies, such as tracking; the school's environment (e.g., Coleman's studies of the peer culture); the community environment (National Institute of Education, 1978); and the students' "anticipated futures". The identification of independent variables by Natriello foreshadows our own subsequent causal model.

Having hinted at the complexity of the dominoes which may fall in each instance of student disengagement, Natriello then opts for micro-analysis of one factor in a chain of events. This is the student's response to the evaluation and reward structure of the school; more specifically, to the evaluation of his academic and social behavior. Four sources of static or incompatibility were identified: incompatible, uncontrollable, unpredictable,

and unobtainable ("Who can ever get an "A" from Mr. B?") evaluations. Experiences of unfair, inconsistent, or unattainable evaluations and criteria were theoretically predicted to result in students dropping out, resigning themselves to a "C", or fighting back against the system.

Natriello derived data by detailed interviewing of students in two suburban high schools in the midwest. Six behavioral and attitudinal indices of disengagement were surveyed, used, and assessed: unexcused absences, skipping school, being willing to settle for a less than optimum grade, cheating on a test, damaging school property, and stealing at school. The findings tended to confirm that students who experienced incompatibilities in their academic evaluations also reported that they were more likely to be absent from school, put forth low effort, or cheat on a test. Vandalism and stealing at school were not widely found ( or admitted). Students overall felt more arbitrariness and unfairness in teachers' academic than in their social evaluations.

What conclusions then do we draw from Natriello? First, the only, elaborated definitions of engagement and disengagement actually encountered. Second, a view of engagement as a variable dependent on multiple determinants (some large and several steps removed from school, others, such as the effect of teachers' academic and social evaluations of the students, "micro" or specific to grading or pedagogical practices.) Third, "evidence" (albeit correlational) that one domino in a long chain does seemingly make a difference as to the adolescent's participation in the school's activities. (More precisely, evaluate him unfairly, unpredictably, etc. and he feels less reason to stay - he's more likely to skip, settle for a "C", or cheat. One might hope that the converse is also true. Evaluate him fairly, predictably, etc. and he is less likely to skip, cheat, or put out minimal effort. Yet even this conclusion goes beyond the actual findings.) Fourth, Natriello sets out six indices of engagement/

disengagement - from skipping school to damaging school property and an interview methodology for assessing them. Fifth, engagement/disengagement is suggested as affecting both the adolescent's academic performance and his social behavior in school. One can engage in academics, sports, extra-curricular activities and so on. And while Natriello is, one infers, concerned ultimately with school outcomes (such as absenteeism, academic apathy or kids who only go through the motions academically, and violence against teachers, students, or school property) and sees engagement as a factor intermediary to those outcomes, nonetheless, he comes about as close as anyone to according engagement the status of a dependent variable - an important school or educational variable in and of itself.

"No reason to stay". We move further from the engagement toward the disengagement end of the continuum in research on who drops out of school and why. Probably the social urgency caused by increasing numbers of white adolescents dropping out of school has caused research to be focussed here rather than on the majority's reasons to stay. In a cynical sense, if motivation ain't broke, don't fix it. But the temptation to infer that studies of dropping out are simply the obverse side of school engagement is strong. And to some degree the phenomena may be mirror images.

Rumberger (1983), of Stanford, suggests that drop-outs have been studied in terms of a number of correlated influences: a) Family background - including such factors as the education of both parents, the family income, whether the marriage is intact, family size, etc. b) Psychological factors - (part of the charge of this report) Rumberger suggests that the role of ability has been the most widely studied benchmark, with dropouts demonstrating lower ability levels. Indices of the adolescent's self-confidence and sociability, and educational and occupational aspirations have also been correlated to dropping

out. c) School and out-of-school behavior. Not surprisingly, poor achievement is often associated with dropping out, as are early marriage and pregnancy, drinking problems, and trouble with the law.

Rumberger points to problems in the drop out research: Few studies have examined how the "classic" predictions of dropping out operate on different racial/cultural groups and on males and females. Further difficulties in modeling who will drop out include the problem of inferring causality from correlations: does delinquency cause dropping out or are both mediated by peer group influence and so on? And how does an investigator determine the relative importance of the various influences?

Rumberger then proposes using both "exogenous" (family background) and "endogenous" factors to show their net effects. Among the latter are ability, educational aspirations, educational aspirations of a best friend, aspirations for a professional or managerial occupation by age 35, and locus of control measures. Whether a student is married or has a child within nine months of leaving school are also included. The dependent variable is dropping out of school.

A very sophisticated and useful statistical model using probability techniques was employed to compare actual and predicted values for the likelihood of dropping out based on both exogenous and endogenous factors (see Rumberger, 1983, p. 205). The sample included 12,000 young men and women included in the National Longitudinal Survey (Center for Human Resource Research, 1980). Only those respondents 19 to 21 years old and not enrolled in high school were used in Rumberger's analysis.

The findings are too detailed to summarize fully. But dropping out is a complex result with multiple and different contributing factors for different youths: females, males, blacks, Hispanics, whites, and so on. Focussing more on who stays in school, one can conclude that family background is a very

important influence. For example, the more reading material at home, the more likely the adolescent is to stay in school. Similarly, the higher the parents' income, the less likely the adolescent is to drop out, but only in white families. The education of both parents is important depending on the sex of the child. Children may use their like-sexed parent as a role model for how much education they ought to obtain. Similarly, the larger the family the more likely a student is to drop out, among whites but not minorities.

Rumberger also found that:

several psychological factors are related to drop-out behavior. Higher levels of educational aspirations reduce the likelihood of dropping out for all groups . . . Higher educational aspirations of a close friend are also associated with lower drop-out rates for most groups. Males who aspire to professional or managerial employment at age 35 also display significantly lower dropout rates. For most groups, higher ability levels are associated with lower dropout rates as well. And especially for white males, an external sense of control suggests higher dropout rates . . . these results imply that high school graduates and dropouts differ along several psychological dimensions, as previous studies have pointed out (Combs and Cooley, 1968; Sewell et al., 1981). (p. 208)

Early marriage and childbearing were also correlated with dropping out of school, especially for young women.

Rumberger's conclusions are instructive. Clearly, the influences that lead to dropping out of school are complex; models of why students leave (or stay) need to be similarly complex. "Solutions" will need to be multiple and systemic. That the tendency toward dropping out often begins early in life suggests that compensatory programs need to be strengthened. Rumberger proposes better counseling early, targeted to minority youth who are more likely to drop out. Attempts to combat related problems such as early marriage,

teenage pregnancy and childbirth are needed.

Rumberger provides a comprehensive, "long" view of acute disengagement or dropping out of school. A despairing, angry, or exultant act in the moment is affected by many factors "far" removed in time and from the school per se. Whether an Hispanic youth lived outside the U.S. for the first 14 years of his life or is American born and raised is, for example, significantly related to whether he stays in school or drops out. There is an aura of cultural, racial, societal determinism about many of the exogenous influences. Parents' income, education, and family size are essentially fixed. Most of the endogenous influences (for example, academic ability, the educational aspirations of an adolescent's friends, sense of fate control) are similarly immutable to the adolescent's present educational program. Fairness and predictability in academic and social evaluation (as studied by Natriello) are within the school's power to control. A student's education and occupational aspiration are somewhat permeable with schooling (e.g., Rosenthal's Pygmalion in the classroom).

Whether the factors which influence dropping out at one end of a continuum with influences which persuade adolescents to stay and engage in school is moot. Probably the answer is "yes" and "no". But the model suggests that whatever the exogenous and endogenous dominoes of engagement are, there will be many reasons to stay/engage in each individual, in combinations probably different for each individual, and certainly different for particular groups of students (e.g., black males, white females, etc.). Moreover, the phenomenon of engagement is unlikely to be understood either in the moment or in the particular circumstances of the school or classroom. Longitudinal rather than cross-sectional research is necessary; a moving picture rather than a snapshot of engagement is needed.

Psychological Alienation: "A Malady of Adolescence." Part of the charge of this report is to determine if there are psychological characteristics which differentiate adolescents in terms of their engagement with school. Locus of control, educational and career aspirations have already been introduced in the summary of Rumberger's research. One broad psychological characteristic put forward is alienation, termed by Sprinthall and Collins (1984) as a classic "malady of adolescence". Alienation refers to the adolescent's feeling of despair and separation, of being outside one's experience, that nothing is really important, of psychological depression.

Sprinthall and Collins describe the alienated adolescent:

During periods of alienation teenagers . . . are less willing to go along with the general expectations of school and parents. Their music . . . is perhaps the most obvious example of their desire to be different . . . (or) a teenager may suddenly appear with a new friend (whose) values seem to be in opposition (to the parents) . . . the teenager will question almost anything and everything as part of the alienation process.

Other indicators of alienation are such acts as mindless vandalism of schools and community parks, extended school absenteeism, careless school work, and a refusal to participate in practically all school and community activities. (p. 399)

A more dramatic portrayal of alienation can be found in "'Rat Pack' Youth: Teenage Rebels in Suburbia. Most come from good homes but their defiant and aimless ways keep parents and schools on edge." (U.S. News and World Report. March 11, 1985)

Seeman (1975) conceptualized alienation as a series of overlapping psychological processes during adolescence that lead to a sense of powerlessness, meaninglessness, normlessness, cultural estrangement, self-estrangement, and social isolation. Mackey and Ahlgren (1977) developed a questionnaire based on Seeman's conceptualization with three major factors: personality incapacity,

cultural estrangement, and guidelessness. It has distinct promise and utility in assessing alienation. Administered to students in four different types of schools (suburban, working class, inner-city, and rural) some of the main findings were:

Males are more likely than females to adopt a me-first posture, with a greater willingness to break laws and act out . . . Also, males are much more likely to engage in mild to moderate anti-social acts than females . . . Students from working class schools are likely to express their feelings of alienation in materialistic terms. They feel that their clothes and their place in society puts them at a disadvantage . . . The main component of alienation for rural students is the lack of a sense of personal mastery . . . (or) lack of confidence . . . among (suburban or inner-city) students there is greater variability in feelings of alienation than there is among the other groups, but alienation does appear as a common attribute. (Sprinthall and Collins, 1984, p. 402-403)

Sprinthall and Collins then advance a roundhouse conclusion:

In our view a good deal of the personal anguish and misery documented in these studies (Seeman, 1975; Mackey and Ahlgren, 1977) is a result of the structure of secondary schools . . . Current programs rarely come to grips with the teenagers' normal concerns about self and relationships. To be sure, a small percentage of adolescents in secondary school excel in activities, athletics, and even occasionally in their academic programs. But these students are those in the leading crowds, perhaps representing only one quarter at most, of the secondary school pupils. Most students, unfortunately, drift through school, not really understanding the point of the curriculum, not grasping the concepts in the courses, and not having the requisite skills to succeed in extracurricular activities. It is small wonder that the Flanagan (1973) survey . . . indicated that the great majority, over two-thirds, of the teenagers sampled twelve years after high school regarded the experience as irrelevant. (p. 404)

Commentary: Sprinthall and Collins introduce a defacto broad, comprehensive psychological characteristic: alienation. Similar in meaning to what Natriello refers to as disengagement, more particularly apathy or low level participation in school and student delinquency, either in the form of violence or vandalism. While Natriello goes "micro" (the fairness and predictability of grading), Sprinthall goes "macro" (the whole structure of secondary schooling) in the search for the one independent variable to explain student alienation. In light of Natriello and Rumberger and the model to follow, citing the school as the major source of adolescent alienation may be more ideological than empirical. Sprinthall and Collins offer a very useful definition of alienation, however, both in their own analysis and the inclusion of Seeman's psychological model. The Mackey-Ahlgren questionnaire is a useful, logically consistent assessment instrument for student alienation. It is sensitive to demographic, SES, and sex differences in adolescents. Whether alienation, like disengagement and dropping out, is continuous logically or statistically with engagement unfortunately can only be speculated upon. They seem like dark and light sides of the moon, but so few conceptual/research probes have been mounted that we can only guess at the continuities. Thus it seems time to turn to the most comprehensive - albeit hypothetical - model of that unknown side - engagement - that we can formulate.

#### A Conception of Student Engagement in Secondary Schools

Anderson has written: "Studying human behavior in schools, as in any organization, involves 'ordering and conceptualizing a buzzing confusion of simultaneously existing, multilevel, mutually interacting variables' (Argyris, 1958, p. 501)" (Anderson, 1982, p. 368). Certainly we have found Argyris's comment exquisitely accurate to the task of this report. What was

meant by student engagement was (and continues to be) less than clear. That it had not been comprehensively conceptualized or measured became increasingly evident as we reviewed the literature and communicated with colleagues. Whether engagement was a dependent variable, an independent variable, or both, and of what influences it is a product, were but a few of the questions raised.

What we did in the face of a buzzing confusion of interacting variables was to produce our own way of ordering and conceptualizing student engagement. To call what follows a model is pretentious. It is first and foremost a heuristic for organizing a very fractionated literature. Hopefully, it also may be useful as a generic way of conceptualizing student engagement, in suggesting variables worthy of further investigation and pertinent findings plus means of assessment.

Some Premises:

1) We define engagement as the attitude leading to, and the behavior of, participation in the secondary school's programs. Engagement is both a state of mind and a way of being/behaving. Perceptual data are a direct indication of engagement.

2) Engagement has multiple determinants, and they are interactive, rather than additive or mediated.

3) Engagement will have impact on many student and school outcomes: achievement, academic knowledge, social behavior, and so on. Much research is necessary before the relative importance of these many variables in engagement can be "known" quantitatively. Research on engagement should look for multiple outcomes and recognize that some effects will be missed or remain unmeasured.

4) Ideally, research and conceptualization of student engagement should

be longitudinal rather than cross-sectional. Almost none of what is reviewed yields other than a "snap shot" in time of the student's participation in the school's programs. It is reasonable to assume that engagement fluctuates, varies (and perhaps develops).

A further word of explanation: Figure 1 presents our ordering/conceptualization of student engagement. Three categories of interacting variables are identified: 1) Societal, Economic, Community, Legal factors; 2) Family and Student Characteristics (including psychological characteristics); 3) School Characteristics. These are related to student engagement and to outcomes. Where available or pertinent, measures are also identified. Pertinent research, conceptions, findings, and instruments are then ordered to the appropriate categories of variables. For purposes of organization and simplicity, each broad, independent variable will be illustrated and discussed separately, that they are interactive is, however, important to remember.

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Figure 1 here

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### Societal, Economic, Community, Legal Norms

These are the influences on engagement most "exogenous", removed from the classrooms, playing fields, or parking lots of the high school. Yet the power of social class norms to socialize and fix adolescent aspirations and commitment to school is persuasively underscored in Claus's (1984) study of

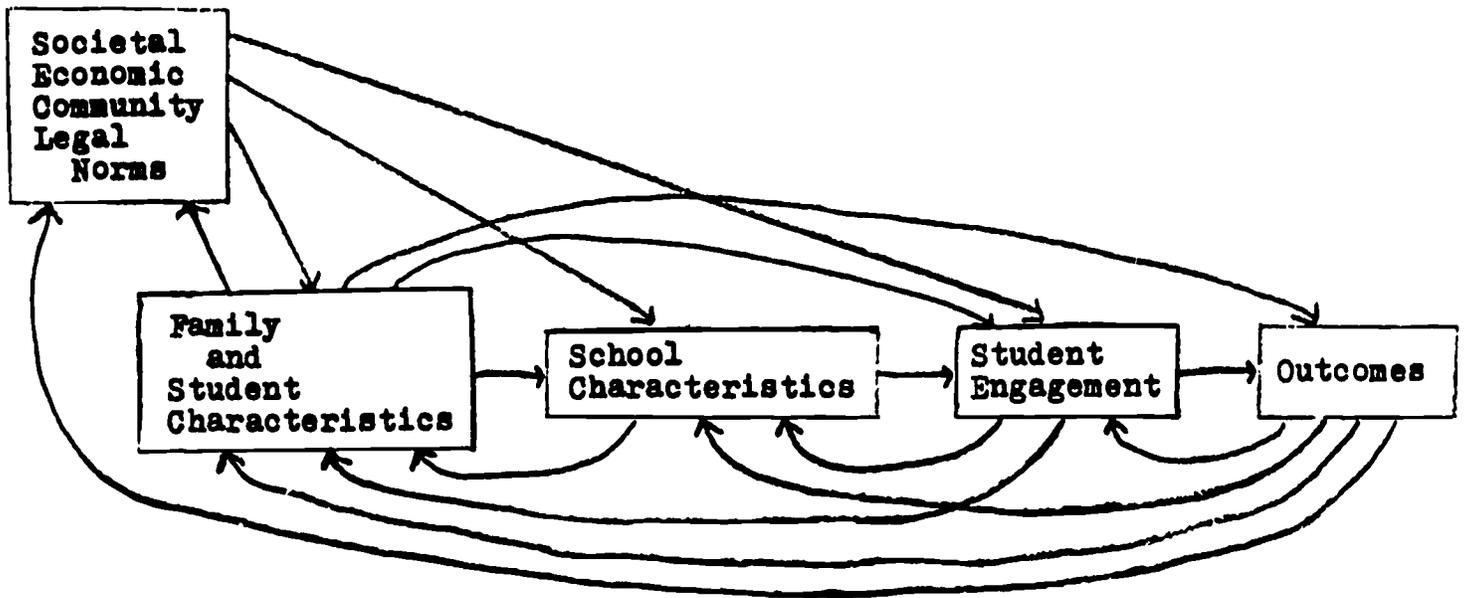


Figure 1

vocational education in New York state. The argument is carefully reasoned and supported by ethnographic data. In cameo, it is that working class parents believe that schools should focus on technical training, basic skills, and the development of attitudes and behaviors functional to the world of work. This high valuation of a technical or vocational orientation to high school, in combination with ambivalent feelings about college, is "an important framework with which vocational students entered their vocational program" (Claus, 1984, p. 15). And their vocational education, while functional to the workplace, stunts the students' capacities to think/decide for themselves.

In a larger sense "class segregation and unequal distribution of developmental opportunity (characterize) our workplaces and schools" (p. 41). Schools engage students in, and reproduce, the class norms and inequities of the larger society. Class is the key unit of analysis and carrier of norms concerning what knowledge is of most worth. Claus argues that what is valued from the shopfloors to the bars to the street corner is "practical knowledge." That is what working class students commit to and engage in, and improved attitudes toward their vocational education result from the new experiences.

Hamilton (personal communication) stated a truism: attendance at high school is compulsory in America. While engagement cannot be legislated, attendance (physical presence) can be. Moreover, there are incentives to stay and participate. The prospects for further education and "a good job" are dependent on finishing high school: higher education and the economy operate that way. These legal, occupational, and educational norms are incentives to engage in the program of the high school.

Assessment tools: Claus used an ethnographic procedure to complement a statewide survey in New York (Walker, et. al., 1982). The ethnographic methodology is described in Claus (1984).

### Family and Student Characteristics

Rumberger (1983), discussed above, separated "exogenous", including family, influences on the decision to disengage and/or drop out of school from "endogenous" factors, such as student characteristics. With Claus (1984), we treat them as separate but essentially interactive or inseparable influences. Logically we are closer to those factors which affect engagement, apathy toward, or dropping out of the high school's programs. The range of influences is from general predispositions (e.g., whether a Hispanic teenager lived in Mexico or New Mexico up to age 14, or "psychological variables" such as ability) to very specific influences such as parent-teacher relationships or the adolescent's self-concept of his academic ability. We shall enumerate and document a number of these inferred influences on engagement - briefly describing the pertinent findings and means of assessment. It is important to reiterate that we believe these family and student characteristics to be interactive, contributing in toto to the student's engagement. As to their magnitude (or order) of influence, or as to what is missing, we can only guess - and won't.

#### Family Characteristics:

Rumberger's family influences on drop out behavior (e.g., the parents' education, income, cultural indices, etc.) have already been rather fully reviewed above. So too have Claus's findings as to the impact of the family's priority for a practical education upon the adolescent's resultant choice of, and greater engagement in, vocational education. Combs and Cooley (1968) found that the economic conditions of the home do not force male students out of school, but are significantly related to whether females drop out. (Assessment instrument: the TALENT test battery, covering a broad spectrum of attributes: I.Q., differential aptitudes and abilities, interests, self-

perceptions, socioeconomic environment, school curriculum, career plans, and a variety of post-high school activities. Sample: 1964 male dropouts, 1817 female dropouts).

Psychological Characteristics of the Student:

Psychological factors in adolescents affecting their engagement in secondary schools were a special concern of the original charge of this paper. The writers found literature references to at least 13 such variables. Most were presumed to affect achievement. The assumption is that they also affect engagement (i.e., that to achieve one must participate - at least in the academic programs of the high school). But the studies to be cited do not make that explicit connection or claim. At the risk of sounding like a broken record, these various psychological traits also are assumed to be interactive, but the order in their discussion is simply logical.

1) Ability - Combs and Cooley (1968) and Claus (1984) identify academic ability as related to disengaging, or dropping out of school. The former authors, using the General Academic Ability Composite in the TALENT battery (see Flanagan, et. al., 1964), found both boys and girls who dropped out to be skewed toward the bottom quartiles of academic ability compared to control students who did not drop out.

Sewell, Palmo and Manni (1981) wrote that:

The findings with respect to intellectual ability lend support to the generalization that the dropout is less intelligent than the general population. Intellectual performance within the average range, however, suggests the need for a reexamination of the notion that the poor academic performance and subsequent dropping out of school results primarily from the inability to keep up with curricula demands. Undoubtedly, intelligence must be recognized as a potent factor in achievement. However, the discrepancy between the intellectual potential and the poor achievement among the dropouts suggests that, if academic failure which restricts promotion and increases alienation from school is a major factor in early school leaving, factors other than IQ such as achievement motivation,

social class influence, and the institutional impact of the school must be further explored to identify the possible reasons for academic failure. (p. 73)

One might wish that the authors had said "in interaction with IQ" instead of "other than IQ". Sewell et. al., used the following methods for assessing the several psychological variables in their study: Intelligence and learning variables - Wechsler Adult Intelligence Scale (Wechsler, 1955) and Raven's Progressive Matrices, sets ABCDE (Raven, 1947); Self-Concept - total Positive Score on the Tennessee Self-Concept Scale (Fitts, 1965); Internal-external control - Intellectual Achievement Responsibility (IAR) questionnaire (Crandall et. al., 1965); Achievement - Reading and Arithmetic tests of the Wide Range Achievement Test (Jastak and Jastak, 1976); Vocational variables - the Differential Aptitude Test (Bennet et. al., 1973); and the Career Maturity Inventory (CMI; Crites, 1973).

2) "Mirror, Mirror": Self-Concept of Academic Ability - Sewell et. al. (1981), in the study cited above, found that "the low mean 'Total Positive' score of the self-concept measure (for the dropout group) would suggest that the general adjustment of the group is substantially different from that which the normative data characterized as psychologically well integrated individuals" (p. 70-72). Claus (1984) reports similar self-concept findings.

Schneider et. al. (1979) found that a student's self-concept of his academic ability was related significantly to his standardized achievement test data, grade point average, and total absences from school. Eight social-psychological variables (self-concept of academic ability, sense of control, perceived parent-student interaction, educational plans, school attraction, perceived school disorder, perceived personal social integration, perceived academic expectations, and perceived academic press) included in the Schneider questionnaire were factors analyzed from normative climate scales used by Brookover et. al. (1973),

Epstein and McPartland (1975), and Coleman (1966; 1961).

The Coopersmith Self-Esteem Inventory, Coopersmith (1981), is an often used measure of self-concept and includes a subscore for academic self-concept. An earlier (Coopersmith, 1967) version of this measure was modified by Sirotnik (1979) and used in "A Study of Schooling in the United States."

In summary, adolescents who drop out of school do not see themselves as capable students. Conversely, doing well academically and regular attendance at high school are associated with a positive self-concept. Dropping out and regular attendance are opposite indices of participation in the school's academic programs. By inference then, engagement is also associated with academic self-concept.

3) Cognitive Complexity: Adams et. al. (1978), citing Wicker (1969), state: "high school students from small schools are not only more likely to be involved in a wider range of school activities and have more opportunities for performance but are more likely to have higher cognitive complexity scores than students from large schools" (p. 269). School size (as in small) is the key independent variable here which is associated both with students' engagement and with their cognitive complexity.

4) Student Gender: Sex is not, strictly speaking, a psychological characteristic of the student. Yet it is a "classic" variable affecting a wide range of educational and developmental outcomes; moreover, Rumberger (1983), Combs and Cooley (1968), and Poole and Low (1982) all found sex differences in who stays and who leaves high school. Staying in school is not identical to participating in the school's programs (one definition of engagement) yet it is a behavior necessary if not sufficient to engagement. Poole and Low's characterizations of stayers and leavers are pertinent:

1. Female stayers are likely to be students who achieve higher grades; conform to school values; are influenced by their teachers; display high academic achievement motivation; possess high organizational skills and verbal ability; come from high SES families and independent schools; discuss job prospects with their parents, are introverted; and do not rate their chances of success highly.
2. Male stayers are likely to be students who achieve lower grades; do not conform to school values; are not influenced by their teachers; share high academic achievement motivation; possess high organizational skills and verbal ability; come from high SES families and attend independent schools; discuss job prospects with parents; are extroverted, self-interested, fatalistic; and rate their chances of success highly.
3. Female leavers are likely to be students who achieve higher grades; conform to school values; are influenced by their teachers; have low academic achievement motivation; display poor organizational skills and low verbal ability; come from low SES families and state or technical schools; do not frequently discuss their job prospects with parents; are introverted; and do not rate their chances of success highly.
4. Male leavers are likely to be students who achieve lower grades; do not conform to school values; are not influenced by their teachers; have low academic achievement motivation; display poor organizational skills; have low verbal ability; come from low SES families and attend government high or technical schools; do not discuss their job prospects with parents; are extroverted, self-interested, and fatalistic; and yet rate their chances of success highly. (pp. 55-59)

For assessment procedures see Poole and Low, pp. 51-54. The general point here is that gender may be expected to influence the adolescent's engagement in the high school's programs but in subtle interaction with a number of other variables.

- 5) Race and ethnicity: The general point just made regarding gender differences in engagement also holds for race and ethnicity (see Rumberger, 1983, reviewed above).
- 6) Sense of control: One of the most widely studied psychological characteristics of adolescents, especially in relation to outcomes such as achievement and dropping out of school, has been "locus of control." Essentially this refers to

the adolescent's sense of whether he has control/influence over his own fate (internal locus of control) or whether he feels like a pawn - jerked around by circumstances or people over which he has little influence (external locus of control). Coleman was one of the first to suggest locus of control as important to whether adolescents succeeded or did not succeed in high school. Rumberger (1983), one of the latest to use Rotter's (1966) assessment instrument, found that especially for white males (but for black and Hispanic males as well) an external locus of control suggests higher drop out rates (i.e., disengagement).

Frase et. al. (1984) argue that both participation (our "engagement") and achievement vary with how the teacher's influence and the student's locus of control interact; "internals" participate and achieve more in response to open, honest, forthright teacher influence, while "externals" accept subtle manipulation and seem to be more intent on pleasing the teacher than finishing the task.

Again, it is important to note that the investigators argue a direct correlation between a psychological characteristic and both participation and achievement (a rare instance of directly relevant literature). This must be balanced against Schneider et. al.'s (1979) finding that locus of control explained four per cent of a student's achievement. So the magnitude of this variable to participation seems to be small.

7) Educational aspirations of students and their friends: Schneider et. al. (1979) found that an adolescent's educational plans accounted for approximately three per cent of his participation or achievement in high school. Rumberger (1983) also found that: "Higher levels of educational aspirations reduce the likelihood of dropping out for all groups (boys, girls, whites, Hispanics, blacks) . . . Higher educational aspirations of a close friend are also associated with lower dropout rates for most groups. Males who aspire to professional or managerial employment at age 35 also display significantly lower drop out rates as well"

(p. 208). The assessment instruments in both the Schneider et. al. and Rumberger studies were questionnaires; in Schneider et. al.'s study correlated with California Achievement Test scores, Grade Point Average, and attendance (as a measure of participation).

8) Identity Status: Hummel and Roselli (1983) found "Identity Achievement" or "Moratorium" ego status, in Marcia's (1966) conception, to be correlated with high academic achievement. By contrast, girls whose sense of who they are is "diffuse" (or vague, unformed) or "foreclosed" (those with their minds (prematurely made up) are underachievers. So personal development or maturity are found to be correlated with achievement. We can infer greater engagement for the achievers, at least in the academic programs of the school, although this was not measured explicitly. Hummel and Roselli found that high achievers gave balanced attention to both academics and their social relationships, whereas six of ten underachievers considered their social life to be more important than their school work. Within a comprehensive definition both groups are engaged in school: the personally more mature females in studies and friends, the personally less mature females where their friends are concerned (all subjects were female). The implication is that greater personal maturity may permit a wider range of participation in the school's programs.

Assessment strategies and instruments: the subjects were 20 high school seniors in a private high school for girls in Pittsburgh; 10 subjects were selected as underachievers and 10 as high achievers, based on their scores on the National Educational Development Test and their grade point averages. Ego identity status was derived from tape-recorded individual interviews using an adapted schedule based on one developed by Marcia (the interview schedule is available from the authors). Differences in identity status between the two groups were assessed using chi square tests.

9) Delay of gratification: Adams, Shea, and Kacergius (1978) argue that teachers who model deferred gratification; association with peers who choose to delay, and direct instruction in delay of gratification all enhance this characteristic in adolescents. And delay of gratification has been found to be correlated with achievement. But this is essentially research on school effects on students' psychosocial maturity, a broad category of influences which we will discuss below.

10) Student morale:

Student morale as an aggregate characteristic appears to be related frequently to both achievement and self-concept. Edmonds (1979), Weber (1971), and Schneider et. al., (1979) all reported the relationship between student morale and achievement . . . Brookover et. al., (1979) reported a relationship between student academic self-concept (an aspect of morale) and achievement . . . Brookover and Schneider (1975) found the same relationship. Student sense of alienation, an aspect of morale, was related to climate in the Licata et. al., (1978) study of Robustness. (Anderson, 1982, p. 399).

Presumably morale then, is a necessary if not sufficient factor in student's engagement.

11) Satisfaction with school: Closely related to the student's morale are his satisfaction with school in general, his commitment to school work, and his attitudes toward teachers. Epstein and McPartland (1976) found all of these student characteristics to be correlated with their sense of the quality of school life. Quality of School Life (QSL) scale was developed which correlated with measures of academic achievement, participation, personality, family background, and sociometric data. The QSL correlated negatively with anxiety about school, cutting school, and cutting classes, and positively with classroom behavior, hours spent on homework, report card grades, and standardized achievement test scores. The investigators' use of grades and achievement as indices of participation/performance is interesting in light of our earlier discussion.

Epstein and McPartland found further that the QSL correlated significantly with a student's history of liking school (.45); his written comments about liking school (.58); how he believed teachers would evaluate his classroom behavior (.34); his industriousness (.34); the chance to participate in class (.30); his social involvement with school (.20); locus of control (.27); and other factors.

The significance of the Epstein and McPartland study seems at least two-fold. First, it offers a carefully validated way of measuring student perceptions of the quality of their school life. Further, the study found significant correlations between how adolescents like school and their performance, participation, and achievement there. We will not get any closer to an explanation of the psychology of engagement.

The findings that the student's commitment to classwork "is most responsive to an individual's belief in the consequences of school work and the character of the work itself (plus) . . . the level of the student's future plans for education, the specificity of occupational plans, open-ended comments on the value of schooling for the future, as well as indicators of approaching industry" (p. 25) seem especially pertinent to the charge of this report. Admittedly, commitment to classwork is half the loaf of engagement in school, but many educators would regard it as the most important half.

12) Attitudes Toward Learning: Rutter (1983) points out that scholastic achievement is a necessary but not sufficient educational objective.

The fundamental issue is not whether people can read, spell, and do sums in an exam but rather whether they can use those skills to read for pleasure, to acquire new knowledge, and to cope with the demands of the new technologies in the work place and in the home. Most of all . . . education must fit us to deal with these altering conditions . . . This . . . requires an attitude of mind. While educators would generally agree on this, the systematic measurement of an interest in learning and of self-motivated education after leaving school has proved difficult to undertake in practice. (p. 7)

Rutter cites Brookover et. al.'s (1979) use of rating scales of the pupils' self-concept of academic ability and of self-reliance as one example of measures of attitudes toward learning. The problem for this paper is that the Brookover et. al. study was done in elementary schools. (For more on academic self-concept, see above.)

The Estes Attitude Scales (Estes, 1981) are available for both primary and secondary level students. The secondary version measures students' attitudes toward five academic subjects; reading, English, math, social studies, and science. This instrument does not provide an overall attitudes-toward-learning score, but does tap into some of what Rutter calls "these hard-to-measure aspects of school effectiveness" (p. 7).

13) Continuation in education: Rutter (1983) uses continuation in education as one reflection of students' attitudes toward learning. He suggests that the proportion of students going on to college or some other form of further education provides a useful criterion of student (family? community?) attitudes and of "school effectiveness" (p. 7).

We now turn to school, in contrast to student, characteristics which appear to influence engagement in academic and extra-curricular programs.

School Characteristics: In regard to characteristics of the high school which may be inferred to influence students' participation in its programs, Rutter's (1979; 1980; 1983) research is of both heuristic and practical value. A longitudinal study of 1500+ children in 12 schools in London, England was conducted beginning at age 10 and following the students to their leaving school at age 16 (See Rutter, 1979, pp. 209-210 - Appendix, for details of assessment strategy and measures). Rutter's findings were "striking in showing large and important differences between secondary schools in each and every measure of pupil success or outcome" (p. 210). These included national examina-

tion results, pupil behavior (tardiness, off-task behavior, talking in class, overt disruption, damage to school property, truancy, etc.), levels of daily attendance, and delinquency. Rutter also debunks some tried and true shibboleths about inner-city schools: a) that spending more money will solve their problems; b) that reducing both the size of the school and the size of the class is the solution - they found no consistent association between school size and class size, and pupil success; c) nor was the organizational structure of the high school important to student outcomes; d) similarly more punishment/discipline (as measured by the number of detentions, amount of corporal punishment) is not the answer.

What does make a difference to academic and behavior outcomes? Rutter (1980) cites seven school influences on students' success in school programs, defined as academic achievement and good behavior:

- 1) The ample use of rewards, praise and appreciation.
- 2) A pleasant and comfortable school/classroom environment (e.g., freedom to use the buildings during breaks, access to telephones, student willingness to approach staff for advice or help).
- 3) "Ample opportunities for children to take responsibility and to participate in the running of their school lives appear conducive to good attainments, attendance and behavior" (p. 216). (For example, being homework monitor, participating in school assemblies or house meetings, etc.). Rutter suggests that there is indication that holding positions of responsibility at school may help students' commitment to their education (for "commitment" here one might read "engagement").
- 4) Academic emphasis: "There is evidence that children tend to make better progress both behaviorally and academically in schools which place an appropriate emphasis on academic matter" (p. 216). (For example, emphasis on academic achievement and on homework.)

5) Teachers who provide positive models of behavior (willingness to see pupils about problems at any time, punctuality in beginning lessons, good care of their classrooms, etc.) make a positive contribution to pupil achievement and behavior.

6) Group management in the classroom: starting lessons promptly, teaching to the class as a whole, and discipline which is "unobtrusive, with quiet reprimands rather than shouting, with a focus on good behavior rather than disruptive acts, but with swift action to deal with disruption when this is necessary" (p. 217) are keys to pupil achievement and behavior.

7) Staff organization: Rutter also found that where teachers have agreed to the curriculum and disciplinary expectations, better student outcomes occur. "Pupil success was greater in schools in which there was the combination of leadership with decision-making at a senior level, and a decision-making process in which all teachers felt their views were represented and seriously considered" (p. 218).

Rutter (1980) comments further on an issue of central concern to this paper; what is it about particular high schools which make it likely that pupils will share their norms/aims (i.e., participate):

Our evidence suggests that four factors may be important in this connection: 1) the general conditions for pupils and staff attitudes to pupils; 2) shared activities between staff and pupils; 3) pupil positions of responsibility with the school system; and 4) the attainment of success, not only in terms of scholastic achievement but also in terms of other activities such as sports, music or drama and indeed in the very taking of positions of responsibility within the school. Especially during the later years at school, it is probably crucial that the pupils are experiencing some success which is both holding them at school and providing them with satisfaction. It is probably for this reason that the different school outcomes on examination success, pupil pupil behavior, and attendance were fairly closely connected. (p. 219)

Other School Characteristics and Outcomes: In a later article, Rutter (1983) returns to a discussion of various outcomes (i.e., measures of a school's effectiveness). Classroom behavior, absenteeism, attitudes toward learning (see the section in student characteristics), and continuation in education are all discussed as criteria for "success". And with a slight twist of meaning, they all seem to be indices of student engagement.

1) Classroom behavior: "most people accept that it is desirable that pupils be attentive, interested, and engaged in their work and that disruptive behavior should be discouraged" (p. 6). Several ways of assessing students' classroom behavior are compared: a) teacher ratings of pupil behavior (Rutter et. al., 1975) are useful, however, they may not be satisfactory because different teachers in different schools may not utilize the same standards; b) Rutter sees pupil self-reports of their behavior as more valid (e.g., skipping classes, writing graffiti), citing his own (1979) use of them; c) "almost certainly, the most satisfactory measure of all is systematic, minute-by-minute recording of classroom behavior by external observers" (p. 6). He then cites three uses of classroom observation (Rutter et. al., 1979; Revans, 1965; Reynolds et. al., 1980). Rutter acknowledges, however, how "enormously time-consuming such assessment procedures are."

2) Absenteeism: Concerning absenteeism, Rutter offers a truism: "If pupils are to learn from classroom teaching, it is necessary that they attend school regularly" (pp. 6-7). Rutter found daily registers to be the most convenient way to assess average attendance but cautions that absenteeism varies markedly with students' age (being highest in the last year of compulsory school attendance). So it is important to use identical age groups when making comparisons between schools.

3) Continuation in education: Mentioned above as an indicator of attitudes toward learning (a psychological characteristic of the student),

continuation in education can also be treated as an outcome variable or as an indicator of school effectiveness (see Rutter, 1983, p. 7). This is but one example of the interactive nature of the variables in the present model.

4) Social behavior: Rutter (1983) reviewed the literature on school characteristics and various aspects of students' social functioning. For example, Moos (1979) related measures of the classroom environment to high school students' sense of well-being and satisfaction with learning. Anti-social behavior or delinquency studies are also reviewed - substantial variations between schools have been found on this variable. The question of how much of these variations are a function of school characteristics or how much they are a function of "intake" characteristics (what kind of adolescents enter the high school) is moot. Again these studies seem to be pertinent to the conception and assessment of the degree to which students participate/engage positively in the school's social life and programs, or act to disrupt them through delinquency.

5) Pupil participation and responsibility: Although already alluded to, Rutter's observations about the importance of pupil participation and responsibility in school merit repeating:

Several studies have shown that outcomes tend to be better when such opportunities (for students to take responsibility and to participate in the running of their school lives) are widespread throughout the school such that the majority of pupils can participate in some way (Ainsworth and Batten, 1974; Reynolds and Murgatroyd, 1977; Rutter et. al., 1979). The findings from the Rutter et. al. (1979) study also suggested that shared out-of-school activities between staff and pupils may be helpful. As in other organizations (see Kuhn, 1964; Lieberman, 1956), the more that pupils can achieve satisfaction in taking roles of responsibility within the educational system, the more likely they are to identify with that system's objectives. (Rutter, 1983, p. 23)

In short, widespread opportunities to engage/participate beget engagement.

6) Alternative schools: On the issue of generalized opportunities to participate in the school's program (i.e., engagement), Duke and Perry (1978) in a study of 10 alternative high schools in California (interviews with 41 teachers and 90 students, plus class observations) agreed with Gump (1974):

1. Students in the small schools participate in over double the number of public performances of students in the large school. The chance to be essential, to gain the active or demanding role in an activity comes much more often to the average small school student.

2. The small school yields satisfactions of developing competence, of meeting challenges, of close cooperation with peers. The large school yields more satisfactions which are vicarious and which are connected to being a part of an imposing institution.

3. Students from small schools report more sense of responsibility to their school's affairs. Furthermore, academically marginal students in the large school are particularly lacking in reported sense of obligations to their school's enterprises. They appear to be social "outsiders," The marginal students in the small schools, however, are just as likely to reveal responsibility attitudes as are the regular students. (p. 284)

In more general terms, the California alternative schools (in Duke and Perry, 1978) were perceived to generate positive student behaviors because of their small size; fewer teachers (and greater consistency of teachers' norms, expectations, and rule enforcement - shades of Natriello - plus greater teacher compatibility); homogeneity of student body (all were predominantly middle-class schools, only one black school-within-a-school was studied, none were more than seven per cent minority, and so on); smaller classes; flexible scheduling; and student ownership ("students in alternative schools were expected to exercise adult-like responsibility in the governance of their programs as well as the conduct of their studies. Students typically shared decision-making authority with teachers, each enjoying an equal vote on practically all matters" p. 386).

One might conclude that one strategy for increasing student engagement in the school's academic and social programs lies in the reorganization of the

monolithic American comprehensive high school into many, small schools within a school with the characteristics noted. For example, Duke and Perry found increased responsibility in all 18 schools studied, informal teacher-student relationships in 17, provisions for independent study in 15, democratic decision-making in 14 of the schools, flexible scheduling in 14, emphasis placed on curriculum relevance in 14 schools, and so on. It is these characteristics, presumably, made possible in part by size, which Duke and Perry conclude make for positive student behavior. Remember, however, that Rutter did not find size of inner-city high schools nor size of classrooms to make a comparable difference to outcome. Rather the critical differences lay in a constellation of interacting school factors not dissimilar, generally, to those that Duke and Perry found to characterize the California alternative schools.

7) Satisfaction with school: The Epstein and McPartland findings on the quality of school life have already been reported. But they merit brief recapitulation here.

In general, students who report high satisfaction with the quality of their school experiences are those who are comfortable with the demands (regulation for behavior) and opportunities (participation) of the school setting, are industrious and ambitious, have more positive self-evaluations and receive positive evaluative messages from teachers and parents . . . (for example) In grades 7, 9 and 12 where achievement scores are available, students with low achievement but high report card grades are more satisfied with school than those with high achievement scores and low grades . . . Second, frequency of opportunity to participate in class (immediate academic and social feedback) is more strongly related to satisfaction than report card grades. Students with low grades who report frequent opportunity to "show what I can do in class" are more satisfied than students who have high grades but infrequent chance to participate . . . It is suggested that the negative effect of low grades may be countered in part by frequent opportunity to participate in class. (p. 20)

Note also that Epstein and McPartland offer a useful assessment instrument, the QSL, for these variables.

Goodlad: A Place Called School. Goodlad (1983) had given careful study to the sources of student, teacher, and parent satisfaction with the American high school (see Overman, 1980; Sirotnik, 1979; and the other technical reports for assessment instruments and procedures). Goodlad found distinctive characteristics of schools ranking highest in "constituent" satisfaction. Referring to the three high schools in the top quartile, Goodlad writes:

Teachers, parents and students expressed relatively high level satisfaction with their schools. The issues of irrelevant curriculum, academic apathy, violence and fear, inaccessibility of counselors, weak academic ambience, and general poor quality of the education offered were of relatively low concern. Students viewed both school and classroom climate positively. Teachers had a positive view of their workplace - the principal's leadership, the quality of the problem-solving process, staff cohesiveness, their power and influence over schoolwide decisions, and their control over their planning and teaching decisions. Also, they viewed themselves as spending more class time on instruction and relatively less on routines and controlling behavior. (p. 253)

(Assessment instruments for the variables mentioned above are available in Overman, 1980 and Sirotnik, 1979).

How students see it:

Again from Goodlad:

The data on students' perception of the school climate at the secondary level support the general picture of a somewhat more academic ambience in the most satisfying schools . . . students, in the most satisfying schools . . . perceived somewhat greater student interest in teachers and classes and somewhat less student preoccupation with sports and friends and, further, saw these aspects in a favorable light. Also, they were more likely to participate in extracurricular activities. (p. 259)

Goodlad's qualitative description of the most satisfying high school (Mayberry) is further revealing of what makes for student engagement (at least by implication).

Teachers, parents and students gave it a good grade - averaged out to a solid B+. More than half . . . perceived Mayberry to be emphasizing the goals they believed to be most important. They came up with a short list of problems perceived to be of some seriousness - drugs and alcohol, student misbehavior and lack of interest on the part of some parents and students. Curricular problems or inadequacies were not included. Very few perceived teachers as not caring about students, or that average students were not receiving enough attention. Nor were many students viewed as not caring about learning.

Some students chose "nothing" as their response when asked what they liked best about their school, but the percentage was small (less than 2%). Clearly, athletes and good-looking students dominated in the popularity polls; nonetheless, nearly one student in five chose smart students as the most popular. Almost every student at Mayberry participated in extracurricular activities. (p. 261)

The assessment instrument for the perception of school-related problems is available in Overman (1980). There were strong negative correlations between teachers' composite problem score (-.74), the students' composite problem score (-.88), and the students' perceptions of the quality of their education (measured by the item "This school gives students a good education"). This finding indicates that "students' evaluation of the quality of the education they are receiving is inversely related to the press of problems experienced by both teachers and students at their schools" (Overman, 1980, p. 20). It may be inferred that the perceived press of problems is a student and school characteristic that affects engagement. The same may be inferred for the perceived class climate/organizational climate variables measured by the instruments in Sirotnik (1979).

Goodlad goes on to describe the classrooms at Mayberry:

Perhaps the generally positive views of their school held by Mayberry students were generated to a considerable degree in the classroom . . . Many of them viewed their teachers as trying to make the class enjoyable, as listening to them and as not ridiculing them or hurting their feelings. They generally knew what was expected of them, saw themselves as getting corrective feedback, and understood the words used

by their teachers. Further, they tended to see their teachers as fair, as not having favorites and their fellow students as helpful and not excessively competitive. Most saw themselves and their peers doing what was expected of them. Overall, the classroom was not an unpleasant place to be . . . Inside the classrooms, the teachers appeared to be very much in charge. They lectured a lot, now and then directing the question to the class as a whole. The answer given, they went on to the next point. Students were often in a listening posture; engagement in reading and writing assignments usually emerged from the period of listening; and in nonacademic classes added to these activities was frequent practice involving some kind of physical activity. The class structure appeared to take care of discipline, teachers spent little time seeking to control classes. Although most classes were rather pleasant, unmarked by student outbursts or scolding by the teacher, there was not much fun or laughter either. The students were reasonably attentive and appeared not to be as bored as an observer might expect. (p. 262)

The last sentence is a telling one. Students who are satisfied are reasonably attentive and not as bored by teacher talk (remember Flanders' two-thirds ratio) as adult observers believe they should be. Goodlad is describing satisfied students (and teachers) plus achievement and "good" student-citizenship. Isn't that what every commission study of the American high school is seeking? And, technically, Natriello's definition of "engagement" (students' participation in the academic and social programs of the school) is met fully by Mayberry high school. Why not, then, xerox its characteristics as a prototype for engagement? Yet there seems little that is intrinsic or autonomous or excited to the engagement Goodlad describes. Rather, there is an air of intellectual dependency and social conformity to it all. In part that may be because of where adolescents are in their development - socially conforming, other directed; cognitively still quite concrete and unreflective. And effective schools and teachers will model the thinking and behaviors of what Vygotski has termed adolescents' "zone of next development." Mayberry High may be just what the good Dr. Vygotski ordered, or it may so closely mirror adolescent thought and behavior as to be stultifying

of real development for many students. The issue of engagement becomes in part a question of engagement with what level of complexity of thinking, social behavior and academic content?

Teacher Characteristics. From Goodlad's analysis of student satisfaction and on the basis of the most enduring mythology of schooling, teachers must make a difference to student engagement in the academic and social programs of the high school. Adams et. al. (1978) point to explicit correlations: "The individual teacher's personal attributes can have important impact on his or her pupils. Teachers with high self-concept (Trowbridge, 1970; Edeburn and Landry, 1974, 1976) and positive attitudes toward intellectual achievement (Fleming and Anttonen, 1971; see Adams and LaVoie, 1977, for a review) are likely to have students who acquire similar positive self-perceptions. Further, given that self concept is positively associated with intelligence, achievement (Lewis and Adank, 1975), locus of control, and verbal fluency (Felker and Thomas, 1971), teachers who emphasize academic productivity are also likely to facilitate self-concept development" (pp. 260-261). Adams et. al go on to describe what teachers can do to increase students' self concepts (e.g., having children read aloud literature about their own ethnic group, assume leadership roles; modeling; prompting; "contingency management" and so on).

How Adams et. al.'s findings directly relate to engagement is, of course, elusive. Yet it is important to recall Schneider et. al.s (1979) finding that self concept of academic ability, sense of control and educational plans predicted 10 per cent of the student's achievement. So we are close to teacher characteristics which seem to effect participation/engagement. Similarly, the quality of teacher-student relationships is argued by Duke and Perry (1978); the Phi Delta Kappa study (1980) and by Rutter (1983) as contributing to both

student achievement and pro-social behavior. Wynne (1980) pointed to the value of good relationships and non-academic events involving both faculty and students as contributing to a school's coherence. Giving students a significant role in decision making in the school or classroom also seems to have beneficial effects (Duke and Perry, 1978; Cox, 1978; Rutter et. al., 1979). Teachers' commitment to improve students' academic performance is strongly correlated with student success (Phi Delta Kappa, 1980).

In short, high expectations by teachers go hand in hand with high achievement by students. The point, we trust, is clear. What teachers believe about themselves, their profession, their students, their commitments, how much participation at least of a non-academic nature they accord students, the general quality of their concern and commitment to their students and their learning do affect the latter's achievement and pro-social behavior. And, we presume, students' participation and engagement as well. Nonetheless, the interdependencies are far from fully mapped.

#### In Conclusion:

A few thoughts in conclusion before we lose even the most engaged of readers in an overly long chronicle. "Engagement" has no real theory, direct assessment tools nor systematic research. At times we have wondered why. We hope our review of some of the pertinent literature, the suggestion of a conceptual model and the identification of certain assessment techniques are at least heuristic to further study. Clearly a student's engagement in his schooling can be a complex state of perception or mind, and a way of acting. Or it may be a numbed conformity or angry dropping out. Many of its antecedents are deeply rooted in the larger society, the family, the student's psyche and in the school and classroom. In this sense much of engagement seems immutable. Yet there are identifiable characteristics of schooling that, if varied, can result

in enhanced participation. That is a separate topic. And there is still the haunting question of engagement to what educational ends? The unruffled operation of the school or classroom? The transmission of the academic content or the social objectives of Mayberry High School? Of Bradford High School? (Goodlad, 1983) Or the evocation of more complex human competencies: cognitive, moral, citizen, vocational and so on in all our children?

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