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SERU Project and Consortium Research Paper*

PORTRAIT OF THE DISENGAGED
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ABSTRACT

The topic of undergraduate academic engagement has been a matter of intense inquiry for more than a generation. This paper examines the other side of the coin: the size and characteristics of academically disengaged populations. Drawing on classic sociological work on conformity and deviance, we theorize four dimensions of student academic disengagement: values disengagement, behavioral disengagement, alternative involvement, and interactional disengagement. Using survey data, we estimate the size of disengaged populations along each of these dimensions and the characteristics of students who are more likely to be found among disengaged populations. In this sample of students from a selective public research university system, the size of the disengaged population varies between 10 and 25 percent, depending on the measure used. Male students, students with low college GPAs, and students in the arts, humanities, and social sciences were more likely to be found among disengaged populations. We conclude by proposing treatments for disengagement attuned to each of the four dimensions and to these disengagement-prone populations.

The topic of undergraduate academic engagement has been a matter of intense inquiry since the mid-1980s when two major reports, one sponsored by the National Institute of Education (NIE Study Group 1984) and the other by the National Governor's Association (NGA 1986), brought the issue to scholarly and public attention. Chickering and Gamson's "seven principles for good practice in undergraduate education" (1987) underscored the role of pedagogical practice in the formation of academically engaged students. The inauguration of the National Survey of Student Engagement (NSSE) in 2000 deepened interest across the country in the qualities and consequences of academic engagement (see, e.g., Kuh 2003). Five NSSE "benchmark" scales measure student-faculty interaction, active and collaborative learning, academic challenges, educational enrichment activities, and supportive institutional climate. Although not without critics (see, e.g., LaNasa, Cabrera, and Transgrud 2009), these five benchmarks have become institutionalized as part of the conventional wisdom for producing academically engaged students in college.

A more recent literature on college student learning brings into sharper focus concerns about how many and what types of students are disengaged from their studies and therefore wasting opportunities for intellectual and human capital development. This research has challenged the extent to which colleges and universities are producing significant gains in student learning in spite of their attention to benchmarks of engagement (Carini, Kuh, and Klein 2006). Former Harvard President Derek Bok (2006) described U.S. four-year colleges and universities as "under-achieving" in undergraduate education, in spite of their evident concern for creating engaging environments. More recently, sociologists Richard Arum and Josipa Roksa (2011) provided evidence, using the Collegiate Learning Assessment, that only a little more than one-third of college students achieved

* The SERU Project and Consortium. SERU is a collaborative of major research universities based at the Center for Studies in Higher Education at UC Berkeley and including the administration of the SERU survey of undergraduates. For more information, see the SERU website at: <http://cshe.berkeley.edu/research/seru/>

statistically significant gains in analytical and critical thinking skills over the course of their college careers, a finding that has been replicated using other data by Pascarella and his colleagues (Pascarella, et al. 2011). A linear decline in study time since the 1960s has been documented in all institutions, majors, and demographic groups (Babcock and Marks 2011), as has the reinforcing trend toward grade inflation (Johnson 2003). The ethnographic literature underscores the concerns of Bok and others about the size of the academically disengaged population on campus and suggests some of the student lifestyle causes of disengagement (see, e.g., Armstrong and Hamilton forthcoming; Holland and Eisenhart 1990; Grigsby 2009; Moffatt 1989; Nathan 2005).

This paper contributes to the examination of student academic disengagement in several ways. We first theorize disengagement in a more fully elaborated way than has been attempted so far. Using survey data from one large American research university system, we examine the validity of the conceptualization based on principal components analysis. We then measure the size of disengaged populations along each theorized dimension. Comparing competing hypotheses about the covariates of disengagement, we also identify the characteristics of disengaged students. A premise of our work is that academic disengagement has not been measured as well as student engagement and, further, that a better understanding of disengaged populations can help colleges and universities to develop messages, programs, and curricula that reduce the size of disengaged populations. We discuss these “treatments” in the concluding section of the paper.

PREVIOUS APPROACHES

One approach to studying student academic disengagement is to identify those who score low on the National Survey of Student Engagement (NSSE) benchmarks. We have serious reservations about this approach, however, because we believe disengagement has its own distinctive structure and sources. If we are correct, it does not follow that disengagement can be measured well by looking at students who score low on the NSSE benchmarks.

Indeed, if we look closely at the NSSE benchmarks, we can see problems in the use of low scores on these measures to indicate disengagement. The benchmarks emphasize acceptance of academic challenges, faculty contact, analytical and critical thinking experiences, educational enrichment opportunities, and supportive campus environments. Not accepting academic challenges may indicate a “play-it-safe” attitude, but is not necessarily indicative of disengagement. Nor does failure to take advantage of academic enrichment opportunities necessarily indicate disengagement; students in programs like engineering have tightly-prescribed curricula that allow little leeway for enrichment activities. Nor are (non)-supportive campus environments likely to be relevant influences on disengagement, at least at major research universities because these institutions typically pay considerable attention to creating welcoming and supportive campus climates.

We also distinguish our work from studies of retention and graduation. Studies of retention and graduation tend to focus on the integration of students into campus community life through activity-based friendship communities, residential life communities, and first-year learning communities (Astin 1984; Braxton, Sullivan and Johnson 1997, Tinto 1993). While we acknowledge that these mechanisms have proven track records for retaining “at-risk” students, we do not believe they address the question of academic disengagement directly. As we will show, it is possible to stay in school (and presumably to graduate) but not to be engaged in studies beyond a very minimal level. Our focus is on the development of students’ intellectual capacities, not on retention and graduation.

THEORETICAL FRAMEWORK

To theorize academic disengagement, we draw on classical sociological work on conformity and deviance. In particular, we draw on Parsons’ (1951: 36-45) theory of institutional integration and Hirschi’s (1970: 16-34) theory of delinquency. We take precautions to avoid the common criticism of Parsons as a theorist prone to conflate ideal-type constructions with empirically-existing circumstances.¹

Although some significant differences exist between Parsons and Hirschi,² both are interested in identifying structures that promote conformity or non-conformity in relation to socially-approved lines of activity. Both emphasized that conformity is a function of (1) motivation to commit to socially-approved goals, (2) institutionally-regulated behavior that demonstrates conformity, (3) interaction patterns (or associations) that sustain normative commitments and (4) values or beliefs that reinforce the legitimacy of the institutional order. For Hirschi, in particular, involvement in conventional lines of activity requires avoidance of over-investment in alternative involvements. Parsons’ work was intended as is a general theory of institutional integration, which he subsequently applied to particular institutional contexts, including schools (Parsons 1959). Hirschi’s work originally focused on the sources of adolescent delinquency, but he and others subsequently developed it as a general theory of crime (Gottfredson and Hirschi 1990).

Thus, for both Parsons and Hirschi, society encourages conformity through a variety of means. The original mechanism is socialization, or the building of need-dispositions for approval of socially-valued lines of activity. The second mechanism is through the institutional enforcement of norms that reflect socially-approved behavior. The third mechanism is organized interaction patterns that draw individuals into connection with others who are committed to socially-approved lines of activity. The fourth mechanism is the promotion of values that reinforce socially-approved lines of activity.

We follow Parsons and Hirschi in viewing disengagement within the framework of conformity and deviance. Both Parsons and Hirschi see processes of social regulation operating together to produce institutionally-integrated systems of action. However, it is also possible to divide the elements of integration into analytically separable dimensions. This approach is based on the premise that sources of non-conformity are multiple and that each one can encourage disengagement from the core purposes of institutions. This is the approach we follow; we treat values disengagement, behavioral disengagement, alternative involvements, and interactional disengagement as analytically separable dimensions. We agree with Parsons and Hirschi that socialization is a prelude and continuing reinforcement for institutional integration, but our data do not allow us to examine pre-college socialization processes.

Many contemporary students of higher education take a pluralistic view of the goals of college -- or even suggest that social development has supplanted intellectual development as the primary focus and priority of colleges. However, we cannot identify academically disengaged populations if we adopt the view that all existing forms of student activity are equally legitimate and of equal normative value.³ Therefore, to measure academic disengagement, it is necessary to set up an ideal-type world in which college life is fundamentally about study and learning. In this way we are able to highlight the size and characteristics of student populations whose goals and practices are most out of keeping with the officially-stated institutional purposes of undergraduate education. Because we self-consciously construct an ideal-type world, rather than assuming that officially-stated views closely mirror the underlying reality of contemporary undergraduate life, our theorizing avoids what has become a common criticism of both Parsons and Hirschi: that their theories assume that institutional norms are more or less fully operative in practice as well as in official pronouncements (see, e.g. Gouldner 1970: part II). We use terms such as "officially-stated institutional values" and "officially-stated institutional norms" to signal that we are theorizing on the basis of an ideal-type construct.

We now discuss the specific dimensions of academic disengagement.

In undergraduate education, the officially-stated core normative activity of colleges and universities is teaching and learning. Belief in this officially-stated core activity should be reflected, first of all, in student values. Students who say that educational values are the primary reason for attending college are in closest alignment with the officially-stated core activity of undergraduate education. Those who de-emphasize or deny the importance of educational values are not in alignment. Instead, their views reflect values disengagement.

Students may be motivated to conform to officially-stated institutional norms whether or not they accept educational values. Instrumental reasons -- the need to maintain good grades to stay in school -- can be a more important source of motivation than value-commitment. We consequently focus on behavioral disengagement as a second dimension of disengagement. Behavioral disengagement is arguably the most important dimension, because it provides direct evidence of students' lack of commitment to officially-stated institutional norms in their daily conduct. Behavioral disengagement is expressed through low levels of time spent on study and non-completion of assignments.

Whereas behavioral disengagement is a direct measure of student practices, alternative involvements reflect investments in environments that are in competition with study for the energy and attention of students.⁴ These are more indirect measures of behavioral disengagement, but they are nevertheless valuable for highlighting centrifugal forces in the environment that detract from the core institutional values and norms. Three such alternative involvements are investments in passive entertainments (watching television and surfing the Internet for fun), campus social life (spending social time with friends and partying), and paid employment (Brint and Cantwell 2010; Brint, Cantwell, and Saxena 2011; Nathan 2005). Students who spend very high amounts of time pursuing these alternative activities can be considered academically disengaged insofar as their energies are directed elsewhere.

Interaction patterns can sustain or weaken commitments to officially-stated normative activities. Some high-achieving students study alone so as to fight off the distractions of group study and other high-achieving students do not participate in class. But for most students engagement in learning requires interaction with professors and other students about course materials. In the academic setting, students' failure to participate in class or to interact about course materials indicates disengagement from

interactions that sustain normative commitments to learning. These practices can be characterized as interactional disengagement.

Thus, we argue that student academic disengagement is a concept with analytically separable dimensions, and can be measured by examining populations of students who: (1) lack belief in officially-stated values, (2) fail to act in conformity with officially-stated normative behaviors, (3) invest heavily in alternative involvements that draw energy and attention away from officially-sanctioned values and behaviors, and/or (4) fail to engage in interactions that sustain these values and behaviors.

DATA AND METHODS: UCUES 2010

The study is based on responses of students to the University of California Undergraduate Experiences Survey (UCUES), fielded in spring and summer 2010. UCUES is administered biannually at each of the nine University of California undergraduate campuses as a census of all students.⁵ The UC system is the largest system of publicly-supported research universities in the country. In 2010, UCUES response rates on the campuses in our study varied from a low of 33 to a high of 53 percent. Previous studies indicate that respondents have somewhat higher grade point averages than non-respondents, but that parameter estimates are unbiased due to the large size of the sample (Chatman 2006). Because of the higher GPAs of respondents as compared to non-respondents, we can assume that our estimates of the size of disengaged populations are conservative.

Students must graduate in the top 12.5 percent of high school students statewide to be eligible for admission into the University of California. The sample therefore constitutes a relatively high-achieving group of students (Douglass 2007). Nonetheless, high levels of variability exist within the population -- in student grades, student behaviors conducive to academic success, and student background and experience characteristics related to academic achievement. While mean scores on variables undoubtedly differ between UC undergraduates and the population of all college students, we expect the form of key relationships observed for UC students to generalize to the population of students attending large and relatively selective research universities.⁶ We believe that the dimensions of disengagement can be generalized to lower-status institutions, but the size of disengaged populations are likely to be larger (see, e.g., Holland and Eisenhart 1990; London 1978; Nathan 2005).

UCUES has been operating for more than a decade as a web-based census. Incentives are provided to students for participation in the survey. All participating students complete a set of core items and, in addition, one of five randomly-assigned modules. Data on student backgrounds, high school records, SAT scores, and UC GPA are appended to the data file by UC staff. The data for this study come from the core items and the student development module. We used the student development module because it included measurement of student values, one dimension in our theorization of academic disengagement.

The census approach adopted in UCUES yields a large sample (8,823 students) in spite of the modular design of the survey. Sizable numbers of respondents were located across each of the eight UC campuses and among all student categories we studied.

Measuring Academic Disengagement

We created measures that tap each of these four dimensions of academic engagement. We attempted to identify student populations who are not merely above average in disengagement, but rather truly disengaged in so far as measurement is possible using survey data drawn from UCUES.

Values Disengagement. Students' stated goals are the clearest indicators of values disengagement. The UCUES student development module asks students a series of questions about their college goals. The questions ask students to indicate how important each of a number of goals is to them. Answer choices range from 1 (not important) to 3 (very important). Our measure of low educational values is comprised of three variables focused on educational goals: how important it is to prepare for graduate or professional school, to achieve a high GPA, and to develop an in-depth understanding of a specific field of study. Based on the unidimensionality of the scale, items were standardized and summed. The resulting scale has an alpha reliability of .59. Our measure of values disengagement takes into account the limited range of response categories in UCUES and the disposition of students to choose the response category "very important" for most of the college goals items. We categorized students who responded to all three items as either "not important" or only "somewhat important" as a disengaged population. Individuals in this disengaged population were coded 1 and the rest were coded 0.

Behavioral Disengagement. For most students, low levels of study effort are primary indicators of behavioral disengagement from study. The minimal responsibilities of schooling are attending class, coming prepared, and turning in assignments on time. Our measure of academic irresponsibility is composed of four items: the frequency with which students say they turn in assignments late, come to class unprepared, come to class without having done the reading, and skip class. Response categories ranged from 1 (never) to 6 (very often). These four variables load on one dimension and were standardized and

summed to create the academic irresponsibility scale. This scale has an alpha reliability of .74 and ranged from -1.48 to 3.09. To determine the population of students who were high on academic irresponsibility, we required that at least three of the four responses to the above questions be 5 (often) or 6 (very often), and allowed just one response to vary below 5. In our logistic regressions to examine characteristics of disengaged students, those in the high academic irresponsibility group were coded 1 and the rest were coded 0. The measure of low study time is composed of a measure for how many hours per week, on average, students spent attending class and studying or preparing for class. The average student is expected to be in class for a minimum of 12 hours per week to be considered a full time student. We added these variables together and categorized students who spent less than 18 hours in class or studying for class as low in study time. Students in the low study time group were coded 1 and everyone else was coded 0. We measured low reading completion by responses to a question about the percentage of reading students said they completed on average during the current term. We categorized students who said they read less than 50 percent of the assigned reading during their last term as low in completion of assigned reading. Students in the low reading group were coded 1 and the rest were coded 0. Failing to do at least half of the assigned reading seems to us a clear indicator of minimal effort.

Alternative Involvements. We also identify students who invest heavily in activities that run counter to the officially-stated core objectives of undergraduate education. Three alternative uses of time stand out: (1) time spent on passive entertainments, such as television watching, (2) time spent on socializing and partying, and (3) time spent on paid employment. These are the primary alternatives to study, and the cultural climate of contemporary college life provides ample opportunities for students to engage in them.⁷ We defined students who spent higher than average time on passive entertainments as those who said they spent higher than the mean time on both watching television (4.22 hours/week) and surfing the Internet “for fun” (11.67 hours/week). Students within this high passive time group were coded 1 and the rest were coded 0. We defined students whose alternative engagements focused on the social life of the campus as those who said they spent higher than the mean time on both socializing with friends (10.28 hours/week) and partying (3.16 hours/week). Students in the high social time category are coded 1 and the rest are coded 0. Students in the high work time group are coded as those reporting more than 15 hours of paid employment each week. This is a figure often used by social scientists to describe students who are working too much to focus sufficient time and energy on their studies (McCarten 1988; Pascarella and Terenzini 2005: 399-402).

Interactional Disengagement. The most important form of participation occurs among groups of students studying together and between students and teachers discussing course materials. These interactions both reflect and sustain commitments to conform to officially-stated institutional norms. Previous research has established that classroom participation and contact with professors out of class has a strong association with academically beneficial outcomes: higher levels of study time, greater conscientiousness, and more frequent reports of analytical and critical thinking experiences (see, e.g., Brint, Cantwell, and Saxena 2011). We based our measure of low participation on a scale of course-based participation in and out of class. This scale consists of seven items measuring the frequency during the last year that students report communicating with faculty either face-to-face or electronically, contributing to class discussion, asking “insightful” questions, and finding courses interesting enough to do more work than required. Response categories ranged from 1 (never) to 6 (very often). Based on the unidimensionality of the scale, items were standardized and summed. The resulting scale has an alpha reliability of .88 and ranged from -1.51 to 2.23. Because of the large number of questions on this scale, we required only five of the seven answers be 2 (rarely) or 1 (never), and we allowed two of the answers to vary above 2. Students who scored low in participation were coded 1, and the rest were coded 0.

Analyzing Dimensions of Disengagement

According to our conceptualization, low scores in one dimension of disengagement do not necessarily imply low scores on other dimensions. Instead, we hypothesize that the dimensions are weakly related to one another, but that indicators within each dimension will be more strongly correlated with one another. Thus, low scores on educational values and low scores on participation may be only weakly correlated with one another. At the same time, measures of low levels of study and low levels of reading completion should, according to our conceptualization be highly correlated with one another, because both indicate behavioral non-conformity. Similarly, we believe students who invest heavily in passive entertainments and campus social life may overlap significantly in the counter-school student culture. However, working long hours may not allow students much time for socializing or passive entertainments, and we anticipate that this alternative involvement may be independent of the other two.

To examine the dimensionality of academic disengagement, we conducted a principal components factor analysis. We expected to find four factors – one for each of the theorized dimensions of academic disengagement -- and further that paid employment would not factor with the other alternative involvements.

Identifying Disengaged Populations

We developed hypotheses about the characteristics of academically disengaged students from the literature on student success. Three general perspectives can be identified in this literature. The first is that students from disadvantaged social backgrounds will be more likely to be disengaged from their studies, because the educationally-relevant activities and cultural capital of their families of origin do not, in general, prepare them to compete well at college (DiMaggio and Mohr 1985; Lareau 2003; Mortenson 2005). From this perspective, one consequence of a lower capacity to compete is disengagement from academic life. This perspective suggests that indicators of social disadvantage, such as first-generation college student, racial-ethnic minority status, and lower levels of family income will be associated, net of covariates, with higher levels of academic disengagement. Gender is the exception to the rule that social disadvantage leads to higher levels of academic disengagement. It is well established that women tend to perform better in academic settings than men (Brint 2006: chap. 8; Michelson 1989; Mortenson 2003). We therefore hypothesize that men will show higher levels of disengagement than women.

First-generation college students are those whose parents have not graduated from a four-year college. First-generation students were coded 1; the rest were coded 0. UCUES racial-ethnic data is organized into seven categories: African/African-American, American Indian, Asian/Asian American, Chicano/Latino, International, Other (typically mixed race), and White/Caucasian. We dummy coded each racial-ethnic group 1 with the other groups coded as 0. We excluded whites as the reference category. Students were asked to report their family income if they were dependents or their personal income if they are independent. This variable was coded 1 for less than \$10,000 a year to 11 for students whose families earned \$200,000 or more a year. Females in our sample were coded 1 and males were coded 0.

The second perspective is that students with weaker academic backgrounds, regardless of their social origins, will be more likely to become disengaged from their studies (Jencks et al. 1979; Jencks, Crouse, and Mueller 1983; Murnane, Willett, and Levy 1995). This perspective suggests that academic indicators such as lower high school grade point averages, lower standardized test scores, and lower college grade point average will be associated, net of covariates, with higher levels of academic disengagement. It suggests further that students who fail to take advantage of enrichment opportunities in college will show higher levels of disengagement.

Students' high school GPA ranged from 1.93 to 4.0. Students' SAT reading and math ranged from a low of 210 to a high of 800. We rescaled these variables to align with the coding of the variables in our analysis by dividing by 100. Students' cumulative college GPA is also included in our analysis and ranges from .1 to 4.0. The average college GPA for our sample was 3.14. Students were asked a series of questions about their participation in research-oriented or creative project-oriented independent study and collaboration opportunities with faculty. This variable is the sum of nine variables that ask students if they have participated in an independent study, volunteer opportunity, or paid position to do research or work on a creative project with a faculty member. This variable ranged from 0 to 9.

The third perspective argues that disciplinary environment selects for levels of engagement. Some disciplines, such as engineering and biological sciences, reduce the numbers of disengaged students early on by failing students out of introductory courses. These students find a home in majors where course demands are lower and disengagement consequently higher (Arcidiacano 2004; Brint, Cantwell, and Saxena 2011; Johnson 2003). Although UC campuses include engineering programs, their focus is otherwise on traditional basic fields in the arts and sciences. For this reason, we were not able to investigate a full range of fields, including some, such as business, that attract many students nationwide. To the extent that we can investigate majors with these data, the disciplinary perspective suggests that, net of covariates, arts, humanities, and social science majors are more likely to be located in disengaged populations. We classified students' majors into seven categories: engineering, physical sciences (including math), life sciences, social sciences, humanities, arts, and undeclared majors. Each category was coded 1 for students within the discipline and 0 for students not in the discipline. We used social sciences as the excluded reference category.

We included the following control variables: upper-division status and campus. Some evidence (Brint and Cantwell 2010) suggests that students disengage from study as they move toward thinking about the labor market and the next stages in their lives, or become disillusioned with academe. Upper-division students were coded 1 in these analyses, and lower-division students were coded 0. Previous work (see, e.g., Brint, Cantwell, and Saxena 2011) showed that the UC campuses vary significantly in their curricular demands. It therefore seemed advisable to control for campus location. Campus identities are masked in our report of findings.

We used logistic regression to investigate the influence of these variables on our measures of academic disengagement. Students in the high disengagement categories were coded 1 and those not in high disengagement categories were coded 0.

Estimates are presented in odds ratios. Due to our large sample size, many of our coefficients would be statistically significant at the commonly used p-value of .05. To guard against type-1 errors, we used a standardized p-value as described in Woolley (2003). The formula: $q=p(\sqrt{n/100})$ standardizes p-values to a sample size of 100. We must solve for p in this equation thus, our p-value was determined by dividing .05 by the square root of our sample size, 8823, divided by 100. This resulted in a conservative p-value of .005. Appendix B provides descriptive statistics about the variables in the analysis.

RESULTS

Dimensionality of Disengagement

To examine the dimensionality of disengagement, we entered all indicators of disengagement into a principal components factor analysis. Table 1 in Appendix A displays the factor loadings for each variable. Factor loadings above .40 are in bold to highlight what variables load on each factor. In some cases, variables loaded on two factors but loaded more highly on the factor originally hypothesized. Factor 1 contains all of the indicators for interactional disengagement as well as the variable capturing the amount of reading students completed in the past academic year. The low reading completion variable loaded more highly, however, on Factor 2 that characterizes behavioral disengagement. Factor 3 contains the variables related to social time use and passive time use. Both of these concepts were hypothesized to be characteristic of alternative involvements. Hours spent in paid employment do not load highly on any of the factors in this model, suggesting that work time is an independent type of alternative involvement, as we hypothesized. Factor 4 contains the variables composing educational values. Two of the variables, preparing for graduate or professional school and obtaining a high GPA, also load (negatively) on the alternative involvements factor (Factor 3), but they load more highly on the values factor. Measures of low study time load highly on Factor 5, indicating that study time is independent of other indicators of behavioral disengagement. This finding does not necessarily challenge our categorization of low study time as a form of behavioral disengagement. We continue to treat low study time as an aspect of behavioral disengagement, but one that does not factor with others.

The findings of this analysis provide considerable support for our conceptualization of disengagement. The multi-dimensionality of disengagement is clearly supported, and, with the exception of the independence of low study time from other forms of behavioral disengagement, the hypothesized dimensions do show up as empirically distinct factors.

Size of the Disengaged Populations

The size of the disengaged population varies depending on the measure used to examine it. On one extreme, students who failed to meet minimal academic responsibilities constitute fewer than 12 percent of UCUES 2010 respondents. At the other, students who scored low on participation constitute nearly 25 percent of respondents. Those who showed low levels of study effort – as measured by low study time and low reading completion -- fell in the middle, at about one-fifth of UCUES respondents. The estimates for each of the eight measures of disengagement are provided in Table 2 (see Appendix A).

While academic disengagement clearly had not reached epidemic proportions among undergraduate students at the University of California who responded to UCUES 2010, in one form or another it touched sizable minorities on every campus.

Characteristics of Disengaged Populations

Table 3 in Appendix A displays the logistic regressions of our dependent variables on our independent variables. As Table 3 indicates, we were unable to explain much of the variance in our disengagement variables with measures of social background, academic achievement, disciplinary major, and our control variables.

Within this context, a consistent story emerged about the social bases of disengagement. Men were more likely to be found in disengaged populations than women. Low GPA students were more likely to be in disengaged populations than high GPA students. Arts, humanities, and social science students were more likely to be found among disengaged populations than natural science and engineering students. These patterns were particularly evident with respect to our variables measuring low educational values, low hours of study time, high hours of passive time, and high hours of social time. Low reading completion was an exception to this pattern only because students in the humanities were less likely to fall in the low reading group than students in the natural sciences and engineering.

The pattern differed appreciably for low participation, however. Here women were more likely to be in the disengaged population than men, and engineering students were more likely to be found among the disengaged population than humanities students. Clearly, in the cases of reading completion and participation, the disciplinary bases of disengagement change.

The selectivity of the University of California may even out social disadvantages that would appear in other contexts. The analyses did, however, support a few familiar images related to social origins. Both Asian and Latino students were more likely

to be found among the low participation group. Students from more affluent families were more likely to be found among the high social time population, and both Asian and Latino students were less likely to be found among this population.

The analyses yielded two unexpected findings: the greater likelihood of upper-division students and students with high standardized test scores to be found among the disengaged populations. In the UCUES data, upper-division students tended to fall away from officially-stated institutional values and norms, perhaps because of cumulative evidence that their interest in study is limited or because they have been unsuccessful in pursuing the majors they originally intended.⁸ Nor did students with high test scores stand out as strong allies of the educational mission of universities. Instead, they were more likely than low SAT students to fall into the academic irresponsibility group. In addition, those who scored high on the SAT reading test were more likely to be in the low study time group, and those who scored high on the SAT math test were more likely to be among the high social time group. These data suggest that many high SAT students have not found the intellectual challenges to keep them engaged with their studies or have chosen to rely on their aptitude for academic work to coast through college.

DISCUSSION

Our research makes four contributions to the study of academic disengagement during the undergraduate years. First, we develop a theory of student academic disengagement, adapting the work of Parsons (1951) and Hirschi (1970). We argue that academic disengagement is not simply the obverse of academic engagement. Instead, it deserves a theorization of its own. Our theorization focuses on four dimensions of disengagement: values disengagement, behavioral disengagement, interactional disengagement, and alternative commitments.

Second, using data from UCUES 2010, we show the plausibility of our conceptualization by investigating structural relationships among measures associated with these dimensions of disengagement. Our analysis yielded a five-factor solution that was generally quite consistent with our conceptualization. Although more analytical work is required before we would be willing to make strong claims for our conceptualization, we take these findings as providing provisional support.

Third, using the same survey data, we provide evidence on the size of disengaged populations in each of our four theorized dimensions. These data suggest that sizable minorities of University of California students can be characterized as academically disengaged. An extreme form of disengagement is failure to comply with minimal requirements such as turning papers in on time and attending class regularly. This extreme form of disengagement pertained to only about one in 10 UCUES respondents. Less extreme measures of study effort yield disengaged populations in the range of one in five respondents, while measures of participation yield disengaged populations in the range of one in four respondents. These levels of disengagement can be considered a significant problem for a university system that is widely regarded as one of the best in the country. Given that UC is a selective institution and UCUES over-represents high-GPA students, it is all-but-certain that the size of behaviorally disengaged populations nationally is higher (and perhaps much higher) than the estimate of approximately one in five found for UCUES respondents. Similarly, the proportion of low participation students is likely higher than the one in four estimated here. Fourth, we provide evidence from UCUES 2010 that gender, academic achievement, and students' majors are more important influences on disengagement than students' social origins. We provide evidence as well that upper-division students and students who score high on standardized tests were more likely to be found among disengaged populations.

Are Treatments Desirable?

Campus decision-makers will wonder whether they should attempt to encourage disengaged students to become more involved in academic life. The answer to this question may seem obvious to those who care about teaching and learning, but it will not be as clear for many campus administrators. It will also not be clear for some faculty members whose priorities are directed toward research and graduate education.

For many years, Harvard University practiced an admissions policy based on the "happy bottom quarter" (Karabel 2005: 291-3). These were students who had family resources or special talents (such as athletic or theatrical talent) that would allow them to enjoy their college years even though they were highly unlikely to finish near the top of their classes. In spite of their lack of academic distinction, Harvard officials reasoned, these students might in the end turn out to be loyal alumni. The situation at other higher education institutions may equally support the idea of the "happy bottom quarter." Because these students, like all others, bring in revenue to their colleges and universities, administrators may be disposed to accommodate them, helping to nurse them to graduation through provision of ample academic support services, while providing co-curricular activities to promote a happy college experience.

This outlook seems increasingly risky. Recent preliminary analysis by Arum and Roksa (2012) suggests that students who have not gained much in their capacity to analyze problems also do not tend to fare well in the labor market. This work is consistent

with research that shows the consequences of college grades for labor market outcomes (see, e.g. Murnane, Willett, and Levy 1995; Bowen and Bok 1998). College costs have raised public concern about whether the traditional four-year college experience is still a good investment, particularly at a time when many college graduates struggle to find jobs. As tuitions go up and online alternatives to college proliferate, the talent waste represented by disengaged populations threatens not only the academic values of colleges and universities, but perhaps in the long run also their bottom lines.

Treating Disengagement

Assuming that college and university leaders decide to address the issue of academic disengagement, what should they do? We suggest that they address each of the major dimensions of disengagement separately. We also suggest they address distinctive populations of disengaged students separately.

Values disengagement can be addressed through academic value statements supported by institutional resource commitments. Students should be reminded regularly that the main reason why they should be attending college is to improve their minds and their intellectual skills. Many alternative messages currently compete with this one for priority. When value messages from campus officials and professional staff are inconsistent with the centrality of learning and intellectual skill development, colleges more readily become a haven for large disengaged populations.

Behavioral disengagement can be addressed through the adoption of greater rigor in the classrooms that need it. One reason why natural science and engineering students are less likely to be among the disengaged is that their classes demand higher levels of effort and attention (see, e.g., Brint, Cantwell, and Saxena 2012). Classes that do not demand much effort from students do not yield much effort. Of course, it is true that increasing rigor requires fine judgment about how much rigor students can handle. If materials are too difficult, many students will simply give up and disengage even more completely. For this reason, heightened expectations must reflect a realistic assessment of students' capacities and be accompanied by the introduction of stimulating materials attuned to students' interests. In the arts, humanities, and social sciences, student populations showing higher levels of disengagement – notably men and upper-division students – can perhaps be brought into the campus learning environment with the introduction of at least some assignments that appeal to their gender and life cycle interests. High test score students were also more likely to be found in disengaged populations. Colleges should consider whether more students with high test scores should be placed into learning environments, such as honors or leadership programs, where expectations are higher and peers share their aptitudes for academic work.

Alternative involvements demand treatments that are fitting to the particular alternative activities they represent. Perhaps the best remedy for students who spend large amounts of time watching entertainment on computers and televisions is to make the campus a lively enough environment that they will wish to reduce the amount of time they spend in front of screens. Campaigns against passive screen time might also be necessary, including institutional encouragement for faculty who ban computers in lecture halls. Social life has been an important part of college in the United States from the colonial period (Horowitz 1987). However, colleges and universities have probably not done as much as they can to link academic events to student life events. Homecoming weekends will never be a time for academic involvement, but celebrations of national heritage days, for example, can be linked to lectures and discussion on issues facing the country or region celebrated. In addition, student organizations whose activities involved discursive practices, such as newspapers and debating societies, could be given priority in campus budgeting for student life activities. Other policies, such as banning fall freshman rush for fraternities and sororities, might also help. Generous financial aid policies and campus work-study opportunities may be the only plausible solutions for students who are spending inordinate amounts of time on work as an alternative to school. Fortunately, paid employment at the level we have measured does not seem to be as serious a rival for students' attention and interest as viewership and socializing.

Low participation can best be addressed through efforts to increase student participation inside and outside of class. Studies have shown that participation is important to sustaining commitment to academic work. It is also a precondition for higher levels of learning for most students, including students in the sciences and engineering (see, e.g., Hake 1998). Here the need is greater in the natural sciences and engineering. Interactive engagement, through in-class small group study of concepts and problems, as well as through student performances of knowledge through debates and presentation are among the many ways now used by instructors to reduce interactional disengagement. So, too, are lectures that provide students with many opportunities to give answers to questions of varying difficulty through less threatening clicker technology. Again, instructors should attempt to design participation opportunities with the interests of particular populations – notably, women and racial-ethnic minorities – in mind. Fortunately, the research literature suggests that small changes in teaching practice can lead to large changes in the interactivity of courses.

Undergraduate teaching and learning is likely to become an increasingly important issue as college costs continue to rise and public discontent grows with the cost of college (see, e.g., Bok 2012).⁹ Recent studies of undergraduate education make clear that some – and perhaps many -- U.S. four-year colleges and universities have reduced their focus on students' intellectual development as the central priority of the undergraduate experience. In the view of the leaders of these “under-achieving” institutions if students are happy and staying in school, their institutions have been a success in the ways that count. This view may be shared by many faculty members who have lost confidence in the work ethic of their students or prefer to spend their time on research or professional activities rather than on the hard work of teaching undergraduate students well. Nevertheless, the future of bricks and mortar colleges as powerful and honored sites of teaching and learning will depend on a re-emphasis on educational values, sufficient rigor in course work, well-targeted restrictions on alternative involvements, and expectations for student interaction in the learning process both inside and outside of class.

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Appendix A. Tables

| Table 1. Principal Components Factor Analysis of all Dependent Variables | | | | | N=8823 |
|--|----------|----------|----------|----------|----------|
| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| Values: Educational | | | | | |
| prepare for graduate or professional school | .17 | -.31 | .44 | .48 | -.18 |
| achieve a high GPA | .23 | -.28 | .42 | .55 | -.17 |
| develop an in-depth understanding of a specific field of study | .25 | -.22 | .30 | .44 | -.13 |
| Behavior | | | | | |
| Academic Irresponsibility | | | | | |
| turned in a course assignment late | -.08 | .52 | -.07 | .11 | .23 |
| came to class without completing assigned reading | -.39 | .63 | -.02 | .35 | .12 |
| came to class unprepared | -.38 | .64 | -.01 | .39 | .15 |
| skipped class | -.31 | .59 | .07 | .21 | -.03 |
| Study Time (sum of 2 items) | | | | | |
| Time allocation: attend classes, discussions sections, or labs | .17 | -.21 | .34 | -.06 | .64 |
| Time allocation: study and other academic activities outside of class | .31 | -.26 | .29 | -.01 | .61 |
| Reading completion: On average, how much of your assigned course reading have you completed this academic year? | .43 | -.48 | .09 | -.20 | -.06 |
| Alternative Commitments | | | | | |
| Social Time (sum of 2 items) | | | | | |
| Time allocation: socializing with friends | -.01 | .35 | .59 | -.33 | -.17 |
| Time allocation: partying | .05 | .42 | .43 | -.27 | -.10 |
| Passive Entertainment (sum of 2 items) | | | | | |
| Time allocation: watching TV | -.17 | .33 | .51 | -.20 | -.01 |
| Time allocation: using computer or smart phone for non-academic purposes | -.07 | .30 | .43 | -.27 | -.05 |
| Work Time^a: Time Allocation: Total work hours for pay per week | .09 | .21 | -.12 | -.03 | .17 |
| Interaction | | | | | |
| Participation with Faculty | | | | | |
| communicated with a faculty member by email or in person | .61 | .21 | -.02 | .13 | .22 |
| talked with the instructor outside of class about issues and concepts derived from a course | .69 | .18 | -.06 | .10 | .23 |
| interacted with faculty during lecture class sections | .72 | .31 | -.14 | -.02 | .07 |
| contributed to class discussion | .76 | .27 | -.08 | -.03 | -.18 |
| brought up ideas or concepts from different courses during class discussions | .77 | .31 | -.08 | -.03 | -.18 |
| asked an insightful question in class | .79 | .31 | -.08 | -.02 | -.17 |
| found a course so interesting that you did more work than was required | .67 | .12 | .02 | .04 | -.02 |
| Eigenvalue | 4.50 | 2.98 | 1.70 | 1.43 | 1.22 |

^a Time working loaded highest on Factor 2. Its loading is low across all factors, indicating it does not fit very well along any dimension.

| Table 2. Size of Disengaged Population on Six Measures of Disengagement, UCUES 2010 | | N=8823 |
|---|---|-----------------|
| Disengagement Measures | Measurement | Population Size |
| Values: Low Education Values | Three items (See Appendix B); selected "not important" or "important" on all three variables. | 12.2% |
| Behavior | | |
| Academic Irresponsibility | Four items (See Appendix B); selected "often" or "very often" on at least three of the items. | 11.6% |
| Low Study Time | Reported less than 18 hours per week spent in class or preparing for class | 19.3% |
| Low Reading | Reported reading less than 50% of the assigned reading in the last school year | 21.5% |
| Alternative Commitments | | |
| High Passive Time Use | Reported above the mean hours per week on both watching television and surfing the internet for fun | 15.2% |
| High Social Time Use | Reported above the mean hours per week on both social activities socializing with friends and partying) | 12.6% |
| High Work Hours | Reported working 16 or more hours per week | 12.6% |
| Behavior: Low Participation in Courses | Seven items (see Appendix B); selected "rarely" or "never" on at least five of the items | 24.2% |

| Table 3. Logistic Regressions for Students in Disengaged Groups | | | | N=8823 |
|---|----------------------|--------------------------------|----------------|-------------|
| | Low Education Values | High Academic Irresponsibility | Low Study Time | Low Reading |
| Social Background | | | | |
| Female | .63* | ns | .81* | .70* |
| White | REF | REF | REF | REF |
| Latino | .68* | ns | ns | .82* |
| Asian | ns | ns | ns | ns |
| Black/African American | ns | ns | ns | ns |
| American Indian | ns | ns | ns | ns |
| Other | ns | ns | ns | ns |
| International | ns | ns | .55* | ns |
| First Generation | ns | ns | ns | ns |
| Family Income | ns | ns | .97* | ns |
| Academic Achievement | | | | |
| HS GPA | ns | .56* | .63* | ns |
| SAT Reading ^a | ns | 1.47* | 1.17* | ns |
| SAT Math ^a | 1.28* | 1.31* | ns | 1.36* |
| College GPA | .49* | .32* | .62* | .54* |
| Indep. Study | ns | ns | .95* | ns |
| Discipline | | | | |
| Engineering | ns | ns | .32* | ns |
| Physical Sci | .69* | ns | .32* | ns |
| Life Science | .51* | .62* | .39* | .82* |
| Social Science | REF | REF | REF | REF |
| Humanities | ns | ns | ns | ns |
| Arts | ns | ns | .61* | ns |
| Undeclared | ns | ns | .67* | ns |
| Controls | | | | |
| Upper Division | 1.71* | 1.36* | 1.35* | 1.61* |
| Campus A | ns | 1.11* | 2.12* | ns |
| Campus B | ns | ns | 2.25* | ns |
| Campus C | ns | ns | 2.58* | ns |
| Campus D | ns | ns | 2.40* | ns |
| Campus E | ns | ns | 2.68* | ns |
| Campus F | ns | ns | ns | ns |
| Campus G | REF | REF | REF | REF |
| Campus H | ns | .60* | 1.24* | ns |
| Pseudo R ² | .05 | .08 | .07 | .04 |
| Log pseudo likelihood | -3118.91 | -2934.54 | -4020.04 | -4413.47 |

*p ≤ .005

^aSAT scores have been rescaled by dividing by 100 to reflect the rest of the data. The range is 2.2 to 8.0.

| Table 3 (continued). Logistic Regressions for Students in Disengaged Groups Continued | | | | N=8823 |
|---|-------------------|------------------|----------------|---------------|
| | High Passive Time | High Social Time | High Work Time | Participation |
| Social Background | | | | |
| Female | .68* | .63* | ns | 1.35* |
| White | REF | REF | REF | REF |
| Latino | ns | .62* | ns | 1.48* |
| Asian | 1.30* | .54* | .46* | 1.95* |
| Black/African American | ns | ns | ns | ns |
| American Indian | ns | ns | ns | ns |
| Other | ns | ns | ns | ns |
| International | ns | ns | ns | ns |
| First Generation | ns | ns | ns | 1.22* |
| Family Income | 1.04* | 1.09* | ns | ns |
| Academic Achievement | | | | |
| HS GPA | ns | ns | ns | 1.57* |
| SAT Reading ^a | ns | ns | ns | .91* |
| SAT Math ^a | ns | 1.15* | ns | 1.20* |
| College GPA | .73* | .59* | .42* | .74* |
| Indep. Study | ns | 1.08* | 1.14* | .76* |
| Discipline | | | | |
| Engineering | .59* | .49* | .52* | 1.52* |
| Physical Sci | ns | .42* | ns | ns |
| Life Science | .65* | .52* | ns | ns |
| Social Science | REF | REF | REF | REF |
| Humanities | ns | ns | ns | .58* |
| Arts | ns | ns | ns | ns |
| Undeclared | ns | .70* | ns | ns |
| Controls | | | | |
| Upper Division | 1.26* | ns | 3.72* | 1.40* |
| Campus A | 1.12* | 1.07* | ns | ns |
| Campus B | 1.19* | ns | .83* | 1.33* |
| Campus C | 1.34* | .78* | 1.35* | 1.48* |
| Campus D | 1.18* | 2.07* | ns | 1.31* |
| Campus E | 1.23* | .77* | ns | 1.54* |
| Campus F | 1.80* | ns | 1.29* | ns |
| Campus G | REF | REF | REF | REF |
| Campus H | ns | .74* | .91* | 1.26* |
| Pseudo R ² | .02 | .07 | .09 | .08 |
| Log pseudo likelihood | -3672.02 | -3104.77 | -1562.54 | -4500.73 |

*p ≤ .005

^aSAT scores have been rescaled by dividing by 100 to reflect the rest of the data. The range is 2.2 to 8.0.

| Appendix B. Descriptive Statistics of Dependent and Independent Variables | | | | | N = 8823 |
|--|-------|----------|----------------------|-----------------------|--------------|
| Dependent Variables | Mean | Std Dev. | Min. | Max. | Loading |
| Values | | | | | |
| Educational | 0.00 | .74 | -2.84 | .67 | $\alpha=.59$ |
| Values: prepare for graduate or professional school | 2.62 | .61 | 1 (Not Important) | 3 (Very Important) | .60 |
| Values: achieve a high GPA | 2.52 | .61 | 1 | 3 | .56 |
| Values: develop an in-depth understanding of a specific field of study | 2.79 | .51 | 1 | 3 | .42 |
| Behavior | | | | | |
| Academic Irresponsibility | 0.00 | 0.75 | -1.48 | 3.09 | $\alpha=.74$ |
| In this academic year: turned in a course assignment late | 1.68 | .85 | 1 (Never) | 6 (Very Often) | .42 |
| In this academic year: came to class without completing assigned reading | 3.55 | 1.32 | 1 | 6 | .73 |
| In this academic year: came to class unprepared | 3.01 | 1.17 | 1 | 6 | .81 |
| In this academic year: skipped class | 2.67 | 1.14 | 1 | 6 | .59 |
| Study Time (sum of 2 items) | 28.21 | 11.70 | 0 | 70 | |
| Time allocation: attend classes, discussions sections, or labs (coded to the midpoint) | 15.70 | 6.02 | 0 | 35 | |
| Time allocation: study and other academic activities outside of class (coded to the midpoint) | 12.51 | 8.04 | 0 | 35 | |
| Reading completion: On average, how much of your assigned course reading have you completed this academic year? | 7.23 | 2.23 | 1 (0-10%) | 10 (91-100%) | |
| Alternative Commitments | | | | | |
| Social Time (sum of 2 items) | 16.93 | 12.30 | 0 | 105 | |
| Time allocation: socializing with friends (coded to midpoint) | 10.28 | 7.95 | 0 | 35 | |
| Time allocation: partying (coded to the midpoint) | 3.16 | 4.41 | 0 | 35 | |
| Passive Entertainment (sum of 2 items) | 15.90 | 11.87 | 0 | 70 | |
| Time allocation: watching TV (coded to the midpoint) | 4.22 | 5.21 | 0 | 35 | |
| Time allocation: using computer or smart phone for non-academic purposes (coded to the midpoint) | 11.67 | 9.23 | 0 | 35 | |
| Work Time: Time Allocation: Total work hours for pay per week (coded to the midpoint) | 5.35 | 7.79 | 0 | 35 | |
| Interaction | | | | | |
| Participation with Faculty | 0.00 | 0.76 | -1.51 | 2.23 | $\alpha=.88$ |
| In this academic year: communicated with a faculty member by email or in person | 3.54 | 1.28 | 1 (Never) | 6 (Very Often) | .58 |
| In this academic year: talked with the instructor outside of class about issues and concepts derived from a course | 2.60 | 1.36 | 1 | 6 | .66 |
| In this academic year: interacted with faculty during lecture class sections | 2.65 | 1.34 | 1 | 6 | .73 |
| In this academic year: contributed to class discussion | 3.59 | 1.33 | 1 | 6 | .79 |
| In this academic year: brought up ideas or concepts from different courses during class discussions | 2.98 | 1.39 | 1 | 6 | .82 |
| In this academic year: asked an insightful question in class | 2.95 | 1.33 | 1 | 6 | .84 |

| | | | | | |
|---|-------------|----------------|----------------|--------------|-----|
| In this academic year: found a course so interesting that you did more work than was required | 2.78 | 1.31 | 1 | 6 | .60 |
| Independent Variables | | | | | |
| Social Background | N | Percent | | | |
| Gender | | | | | |
| Male | 3621 | 41.0 | | | |
| Female | 5202 | 59.0 | | | |
| Race/Ethnicity | | | | | |
| White | 2965 | 33.6 | | | |
| Latino | 1328 | 15.1 | | | |
| Asian | 4006 | 45.4 | | | |
| Black/African | 214 | 2.4 | | | |
| American Indian | 60 | .7 | | | |
| Other | 124 | 1.4 | | | |
| International Student | 126 | 1.4 | | | |
| First Generation College Student | 2200 | 24.9 | | | |
| | Mean | Std Dev | Min. | Max | |
| Family Income | 6.03 | 2.89 | 1 (< \$10K) | 11 (\$200K+) | |
| Academic Achievement | | | | | |
| High School GPA | 3.64 | .30 | 1.93 | 4.0 | |
| SAT Reading | 599.99 | 91.80 | 220 | 800 | |
| SAT Math | 636.78 | 92.32 | 210 | 800 | |
| College Cumulative GPA | 3.14 | .50 | .1 | 4.0 | |
| Independent Study | 1.98 | 1.73 | 0 | 9 | |
| Disciplinary Categories | N | Percent | | | |
| Engineering | 1442 | 16.3 | | | |
| Physical Science | 519 | 5.9 | | | |
| Life Science | 2450 | 27.8 | | | |
| Social Science | 2346 | 26.6 | | | |
| Humanities | 666 | 7.5 | | | |
| Arts | 353 | 4.0 | | | |
| Undeclared | 1047 | 11.9 | | | |
| Control Variables | N | Percent | | | |
| Upper Division | 5871 | 66.5 | | | |
| Campus A | 1466 | 16.6 | | | |
| Campus B | 469 | 5.3 | | | |
| Campus C | 1760 | 19.9 | | | |
| Campus D | 758 | 8.6 | | | |
| Campus E | 946 | 10.7 | | | |
| Campus F | 491 | 5.6 | | | |
| Campus G | 1075 | 12.2 | | | |
| Campus H | 1858 | 21.1 | | | |

NOTES

¹ Indeed, Parsons (1951: 39) was careful to note a continuum between institutional integration and complete normlessness, the limiting case. He wrote that institutional integration is always a "matter of degree." Similarly, he noted, "The structure of normative patterns in any but the simplest subsystem is always intricate and usually far from fully integrated" (Parsons 1951: 259).

² Parsons, for example, did not emphasize as much as Hirschi the avoidance of alternative involvements as an indicator of conformity. Hirschi did not emphasize as much as Parsons the complementarity of expectations enacted in status-role performances as structures for producing social regulation.

³ Some have made the case that in most universities neither students nor faculty nor administrators are governed by officially-approved normative patterns. Instead, according to these writers, social life is primary for students, research and professional life is primary for faculty, and enrollments are primary for administrators (see, e.g., Arum and Roksa 2011: 142-3).

⁴ Not all alternative involvements pose threats in this way, however. For example, previous research has shown that time spent with family tends not to detract from study commitments, but rather to re-enforce them (Brint, Cantwell and Saxena 2011).

⁵ Because of the small number of respondents from UC Merced, this campus was excluded from the study.

⁶ The findings almost certainly do not apply to small liberal arts colleges where staff resources and the liberal arts ethos tend to limit levels of student disengagement. However, the results may be relevant to prestigious private research universities, given the importance of competitive achievement at these institutions and their long-standing concern to admit some less competitive students who will be content or even happy to graduate in the bottom quarter of their classes (Karabel 2005).

⁷ Indeed, the average UC student spends more than 40 hours per week on social activities, but only about 27 hours in class or in out-of-class study (Brint, Douglass, Thomson, and Chatman 2011).

⁸ Seniors were statistically more likely than juniors to be found among most of the disengaged populations. We do not report findings by class in school because the UCUES student development module included relatively few freshmen (fewer than 10 percent of the total).

⁹ In this context of heightened public scrutiny, reforms developed and implemented by academic professionals will likely prove preferable to those promoted by regulatory bodies and politicians. The latter are willing to use legal power to produce change, but they are not often attuned to the research literature related to effective teaching and learning practices (Bok 2012).