Documenting Uncertain Times: Post-graduate Transitions of the Academically Adrift Cohort

RICHARD ARUM ESTHER CHO JEANNIE KIM JOSIPA ROKSA





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While this research would not have been possible without the contributions from the individuals and institutions identified above, the authors of this report are fully responsible for all findings presented, claims made, and opinions expressed. Address correspondence to edresearch@ssrc.org.

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Executive Summary

GRADUATES ENTERED THE LABOR MARKET DURING AN ESPECIALLY DIFFICULT TIME IN THE RECENT ECONOMIC HISTORY OF THE UNITED STATES.

This report describes post-college transitions of students originally profiled in Academically Adrift: Limited Learning on College Campuses (University of Chicago Press, 2011). In our earlier research, we documented that large numbers of students were progressing through higher education while experiencing few academic demands, investing limited effort in their academic endeavors and showing disturbingly low gains in academic performance as measured by the Collegiate Learning Assessment (CLA). In the spring of 2011, we administered online surveys to nearly 1,000 students from the Academically Adrift cohort in order to explore the relationship between academic engagement/growth¹ and performance on the CLA at the end of college and subsequent life-course outcomes. Our sample consists of students who graduated "on time," that is, they graduated within six years of entering college, with the vast majority having graduated in four years.²

Our current research is noteworthy as these graduates entered the labor market during an especially difficult time in the recent economic history of the United States. Although school-to-work transitions in the United States have long been recognized as challenging given the relatively weak institutional linkages between schools and employers, four-year college graduates have typically not been a source of concern among social scientists in this country. However, we found large numbers of graduates facing difficult transitions. In 2011, which for most respondents was approximately two years after bachelor's degree completion:

- 6.9% of graduates who were not enrolled full-time in school were unemployed;
- of our sample reported having student loans, owing on average \$27,200, with 15 percent of graduates with loans owing \$50,000 or more;
- 46% of our sample reported having credit card debt, owing on average \$1,880;
- of our sample received financial assistance from parents;
- 24% of graduates reported living at home with parents or relatives;
- \$34,900 Average reported income for graduates who were employed full-time.

These financial circumstances indicate that the transitions of recent graduates into the labor market have been fraught with challenges. Moreover, we found that variation in financial circumstances (as measured by unemployment, college loan and credit card debt, living situation, and parental assistance) was associated with students' CLA performance, academic engagement/ growth, and institutional selectivity:

Graduates who scored in the bottom quintile of the CLA were three times more likely to be unemployed than those who scored in the top quintile on the CLA (9.6 percent compared to 3.1 percent), twice as likely to be living at home (35 percent compared to 18 percent) and significantly more likely to have amassed credit card debt (51 percent compared to 37 percent).

Graduates who displayed high academic engagement/ growth in their undergraduate years were less likely to have credit card debt than graduates who exhibited low academic engagement/growth (38 percent compared to 56 percent).

Graduates of highly selective institutions were less likely to have borrowed loans to pay for college, were less likely to have credit card debt, and were less likely to live at home with parents and relatives compared to graduates of less selective institutions.

Continued on next page

Academic engagement/growth is a summary measure including taking courses with reading and writing requirements, hours studying and demonstrated growth on the CLA. For detailed information, please refer to the methodological appendix.

² 86 percent of our sample for this analysis graduated in 2009, 13 percent in 2010, and 1 percent in 2011.

Educational experiences were also related to the degree of civic engagement of graduates as measured by reading the news and discussing politics and public affairs:

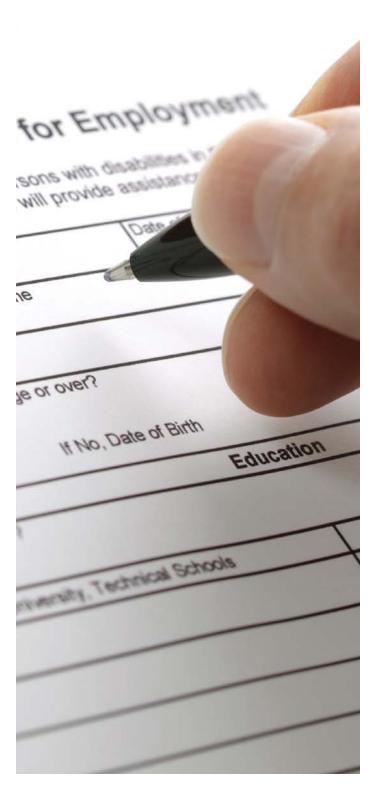
Graduates who exhibited high academic engagement/growth in college were significantly more likely to read the news and discuss politics and public affairs compared to students who displayed low academic engagement/growth.

Graduates who scored in the highest quintile on the CLA in their senior year were more likely to read the news and discuss politics and public affairs compared to students in the bottom quintile.

Graduates of highly selective institutions were significantly more likely to read the news and discuss politics and public affairs compared to graduates of less selective institutions.

The associations found between educational experiences and life-course outcomes (such as employment, financial status, and civic engagement), further reinforce an appreciation of the importance of college academic achievement and performance. Our findings indicate that educational experiences have significant consequences for individuals and the larger society. Patterns identified in this report suggest the need for developing policies and shaping institutional practices to improve the quality of undergraduate experiences as well as future systematic investigation of the relationship between college experiences and life-course outcomes of recent college graduates.





Introduction

While our previous work in Academically Adrift: Limited Learning on College Campuses (University of Chicago Press, 2011) and related reports Improving Undergraduate Learning and Learning to Reason and Communicate in College shed light on the state of undergraduate education and learning in the United States, we now consider the transitions of these college students as they graduate and enter the labor market or continue their education in graduate school. How are students' educational experiences related to life-course transitions, if at all? The third phase of the CLA Longitudinal Study seeks to address this question by focusing on the labor market, and financial and social experiences of individuals after college. We measure performance at the end of college by senior year scores on the Collegiate Learning Assessment (CLA). Academic engagement/growth is a summary measure including taking courses with reading and writing requirements, hours studying and demonstrated growth on the CLA during college. We also examine a range of other factors including institutional selectivity, college major and social background.3

This wave of the study takes place at a particularly difficult time in history, as the respondents in our sample begin their search for employment during the toughest labor market in nearly three decades. The overall unemployment rate has been at or above 9 percent since mid-2009—the longest it has been so high since the Great Depression. According to the Bureau of Labor Statistics, even among college graduates, whose unemployment rate is much lower than that of the population as a whole, the rate has doubled since the onset of the recession from 2.2 percent in May 2008 to 5.1 percent in November 2010

and 4.4 percent in November 2011 (U.S. Department of Labor 2011). In his pioneering study of children born in the 1920s during the Great Depression, Glen Elders documented the profound effects that historical change can have on human development not only in the formative years but also throughout the life course (Elders, 1974). He found that early experiences of economic hardships can have lifelong consequences. Given the current recession, the findings identified in this report regarding the economic outcomes and financial circumstances of our sample of graduates present a particular cause of concern.

In addition to the unique time in history, it is important to note that respondents in our sample have graduated within six years from four-year colleges and universities. Therefore, while the trends presented in this report are not representative of all college graduates in general—as many do not graduate "on time" from four-year colleges where they initially enrolled as freshmen—they are most likely an understatement of the extent of the difficulties experienced by this population.

Financial Circumstances of College Graduates in the Economic Downturn

COLLEGE GRADUATES WHO
PERFORMED IN THE BOTTOM
QUINTILE OF THE CLA WERE
THREE TIMES MORE LIKELY TO
BE UNEMPLOYED IN SPRING 2011
THAN THOSE WHO PERFORMED
IN THE TOP QUINTILE.

Employment Status and Income

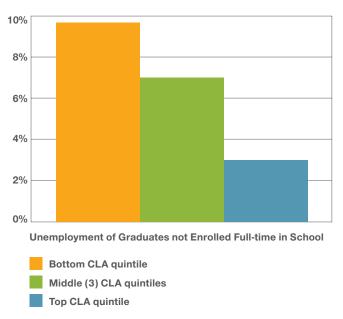
Over the past couple years, unemployment for recent college graduates, which traditionally is higher than all college graduates who potentially have had decades of labor market experience, has climbed and reached, according to some estimates, 9.1 percent in 2010—the highest annual rate on record for young college graduates aged 20 to 24 (Project on Student Debt 2011). For our cohort of students, the unemployment rate is lower than this 2010 national estimate: of the 623 participants in our sample who were in the labor market and not enrolled full-time in graduate school, 6.9 percent were unemployed in the spring of 2011 (Table 2). While recent graduates of four-year institutions are in a more favorable position in the labor market than the broader population, only 53 percent of our sample (or 77 percent of graduates not enrolled full-time in graduate school) had secured full-time employment. Of particular note we found that for those not enrolled full-time in graduate school, college graduates who performed in the bottom quintile of the CLA were three times more likely to be unemployed in spring 2011 than those who performed in the top quintile (9.6 percent compared to 3.1 percent, see Figure 1). Among college graduates working fulltime, the average income was \$34,900. Moreover, nearly a third of our sample reported being enrolled in graduate school full-time. It is likely that the reasons for continued school enrollment are diverse and include for some the difficulties in finding satisfactory employment opportunities after completing college.

Patterns of employment and enrollment in graduate school vary notably by college major (Table 2). Compared to business majors, social sciences and humanities as well as science and math majors were less likely employed full-time and more likely enrolled in school full-time. These findings highlight that students majoring in business, who have been shown in our earlier work to exhibit limited growth in generic higher order skills as measured by the CLA, were less likely to enter graduate school in the first two years after college than students majoring in science and math or in social sciences and humanities. However, average incomes of students majoring in business were higher than those majoring in social science and humanities, math and science, education and social work as well as communications. Full-time employed graduates who majored in engineering/computer science had the highest average annual income at \$50,600.

Financial Circumstances

Student borrowing has risen to \$100 billion annually, more than doubling after inflation over the past decade, surpassing national credit card debt, and contributing to total U.S. student loan debt approaching one trillion dollars (Cauchon 2011; Federal Reserve 2011; FinAid 2011). According to the Project on Student Debt (2010), college seniors who graduated in 2009 carried an average of \$24,000 in student loan debt. Our figures are similar (Table 3). Sixty-five percent of our sample reported having college loans with a mean debt of \$27,200. Fifteen percent of those with college loans reported having a debt amount of \$50,000 or more and 44 percent reported having a debt amount between \$20,000 and \$50,000. Furthermore, we found that many college graduates have credit card debt as well. Nearly half of the respondents in our study reported having credit card debt averaging \$1,880.

Figure 1. Unemployment by CLA Performance



Parental Education and Academic Performance

College graduates whose parents have graduate or professional degrees were less likely to have college loans or credit card debt than other graduates, particularly those whose parents had no college experience (Table 3). Our findings also show that higher parental education is associated with a greater likelihood of receiving financial assistance after college from parents as well as a lower likelihood of living at home. Among respondents whose parents completed professional or graduate degrees: 52 percent reported having college loans and 40 percent credit card debt; 76 percent received financial assistance from their parents and only 18 percent reported living at home. The results were significantly different for those graduates whose parents had no college experience: three-quarters of them reported having college loans and 54 percent had credit card debt; fewer graduates from these backgrounds received financial assistance from their parents (63 percent) and more were living at home (26 percent).

Financial circumstances were also associated with the selectivity of the institution attended (Figure 2). The higher the selectivity of the institution, the less likely it was for graduates in our sample to have taken out student loans, have credit card debt, and be living with parents or relatives. Of graduates from highly selective colleges,

64 percent reported having college loans and 40 percent had credit card debt, while 72 percent of individuals who attended less selective schools had college loans and 50 percent had credit card debt. A significantly higher proportion of graduates from less selective colleges and universities also were living at home compared to those from highly selective institutions.

Likewise, students with higher academic engagement/ growth and performance on the CLA were less likely to have credit card debt. Thirty-eight percent of students who exhibited high academic engagement/growth reported having credit card debt, compared to more than half of the students who exhibited low academic engagement/growth. Similarly, students scoring in the top quintile of the CLA in their senior year were less likely to report having credit card debt (37 percent), compared to students in the bottom quintile of CLA performance (51 percent). Moreover, a significantly greater proportion of individuals who performed in the bottom quintile of CLA in their senior year reported living at home (35 percent) than those in the top quintile (18 percent, see Figure 3). These results potentially suggest that high-achieving college graduates are more successful in navigating adult transitions along this dimension.

Figure 2. Forms of Support by College Selectivity

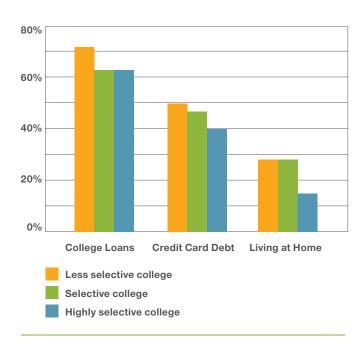
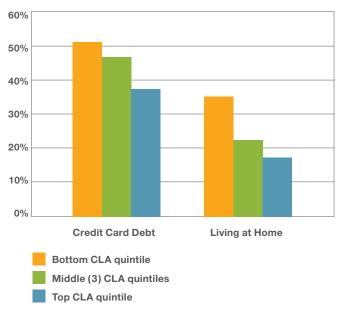


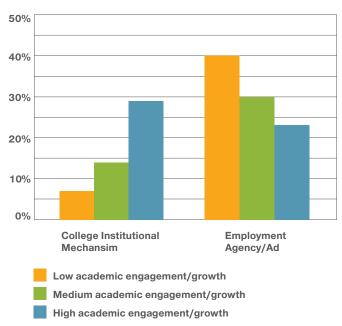
Figure 3. Forms of Support by CLA Performance



Race/Ethnicity

In addition to variation in financial circumstances by parental education and students' educational experiences, we observed racial/ethnic differences in the amount of financial assistance graduates received from parents and their probability of living at home (Table 3). Asian graduates reported borrowing the least amount to pay for college, averaging \$18,800, compared to African-American graduates with \$28,600, whites with \$27,800 and Hispanics with \$24,500. Asian graduates also received significantly more financial assistance from their parents than any other racial/ethnic group, reporting an average of \$8,100 in parental assistance, compared to \$5,000 for African-American graduates, \$4,900 for white graduates, and \$2,400 for Hispanic graduates. While Hispanic respondents received the least amount of financial help from their parents, they were significantly more likely to live with parents or relatives approximately two years out of college. Forty-four percent of Hispanic graduates in our sample reported living with parents or relatives, while slightly less than a fifth of white graduates did.

Figure 4. Job Search Mechanisms by Academic Engagement/Growth



Job Search

Diverse mechanisms exist for seekers of employment to find positions (Table 4). Most college students have the advantage of college networks, both social and professional, as well as on-campus career centers and online portals specific to their institution. To examine the various ways that recent college graduates find employment today, we asked those employed full-time (who were not enrolled full-time in graduate school) whether their current job was found through college social networks, employment agencies and ads, or a prior job. Furthermore, to gauge how much importance employers place on formal undergraduate academic performance. we asked these individuals whether they were required to submit transcripts to their current employers. Only 37 percent of the respondents reported that their current employers had asked to see their transcripts. That nearly two-thirds of these recent graduates' employers did not require them to submit transcripts speaks to the perceived limited value and trust employers currently place in this traditional record of academic achievement in higher education.

Generally, more respondents reported using an employment agency or ad to find their current job than college social networks. We also observed variation by gender: a significantly higher percentage of males used college social networks and institutional mechanisms for their current position of employment than females. Moreover, the higher the selectivity of the institution attended, the more graduates used college social networks and their alma mater (as opposed to employment agencies and ads) compared to graduates from less selective colleges and universities. Graduates who exhibited higher academic engagement/growth in college also were more likely to have found their jobs through institutional networks than unaffiliated job agencies and ads (Figure 4). These findings demonstrate the notable influence that one's institution can have on the process of job search as well as placement.

Social Circumstances and Experiences of College Graduates

GRADUATES WHO WERE MORE ENGAGED IN THEIR UNDERGRADUATE STUDIES OR PERFORMED IN THE HIGHEST QUINTILE OF THE CLA IN THEIR SENIOR YEAR WERE MORE LIKELY TO READ THE NEWS AND DISCUSS POLITICS AND PUBLIC AFFAIRS.

Civic Engagement

In recent years there has been substantial dialogue about the importance of 21st Century skills and the role of higher education in fostering global competencies to ensure that students become active and effective members of society in an era of increasing global interconnectedness and competitiveness (Partnership for 21st Century Skills 2011). Civic literacy is a key component of 21st Century skills as it not only facilitates understanding of the intricacy of global issues but also allows one to develop effective and appropriate responses toward global challenges (Reimers 2009). Therefore, we asked our recent college graduates how often they read the news, discuss politics and public affairs, and do volunteer work as measures of their civic engagement. Only the first two forms of engagement will be discussed in this report since the latter, although reported by 54 percent of graduates, did not significantly vary along the dimensions we examined.

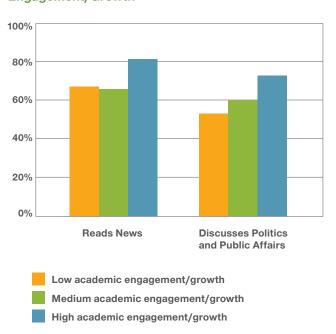
Our findings reveal strong associations between parental education, academic engagement/growth, CLA performance, and post-college civic engagement (Table 5). Graduates who exhibited higher academic engagement/growth, performed in the top quintile on the CLA in their senior year in college, and graduates whose parents hold a professional or graduate degree were significantly more civically engaged. Parental education is strongly associated with civic engagement. Only fifty-six percent of graduates whose parents have a high school education or less reported reading the news at least weekly, while 73 percent of graduates whose parents hold graduate or professional degrees did. Similarly, a significantly larger proportion of graduates with parents holding graduate or professional degrees reported discussing politics and public affairs at least weekly. Socioeconomic background, often measured by parental education, has been theorized to have a significant impact on educational trajectories of children as it shapes peer climates in school as well as the availability of academic resources both within the home and in school (Coleman 1966; Jencks 1972; Mare 1980). Our findings illuminate another dimension worthy of consideration: the relationship between parental education and one's post-college civic engagement.

In addition to parental education, the institutional context of the graduates is strongly associated with a greater likelihood of reading the news and discussing politics and public affairs. Approximately 80 percent of graduates from highly selective institutions reported reading the news and discussing politics and public affairs at least weekly, while only approximately 50 percent of graduates from less selective colleges reported doing so. These results indicate that both family and school environments are strongly related to an individual's awareness of and interest in social issues and the current state of public affairs.

Moreover, graduates who were more engaged in their undergraduate studies or performed in the highest quintile of the CLA in their senior year were more likely to read the news and discuss politics and public affairs. Eighty-one percent of graduates who had displayed high academic engagement/growth in college reported reading the news at least weekly, while only 67 percent of individuals with low levels of academic engagement/growth did (Figure 5). These findings suggest a strong relationship between academic performance and civic engagement.

Notably, we observe no differences in civic engagement between students from different racial/ethnic groups. However, our results reveal variation by gender: seventy-eight percent of males reported reading the news at least weekly compared to only 64 percent of females. Likewise, 70 percent of male college graduates discuss politics and public affairs at least weekly, while only 57 percent of females reported doing so.

Figure 5. Civic Engagement by Academic Engagement/Growth





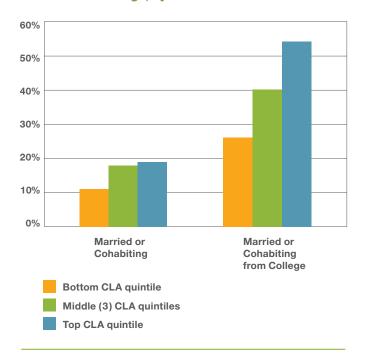
Personal Relationships and Living Arrangements

In this section of the report, we present findings concerning personal relationships and living arrangements of college graduates in our sample. We are particularly interested in the extent to which individuals find romantic partners while attending college. Seventeen percent of our respondents were married or cohabiting and almost a third were in a serious romantic relationship. Notably, among married and cohabiting respondents, 42 percent met their spouse/partner in college. Similarly, among those in a serious romantic relationship, 39 percent met their partner in college. A higher proportion of males are married, cohabiting or in a serious relationship with a partner from college than females (Table 6). However, a lower percentage of males are married or cohabiting overall. These findings may potentially reflect the disproportionate distribution of males and females on college campuses today.

We also observed a notable variation in living arrangements by race/ethnicity. No graduates of Hispanic background reported renting with college friends, but Hispanic graduates had the highest percentage of individuals living at home (44 percent). African-American graduates had the lowest percentage of renting with college friends or a college partner and the second highest rate of living at home. Some respondents living at home after graduation were already residing at home while in school. Of those who moved out during college (either into campus housing or independently), a significantly higher percentage of African-American and Asian respondents moved back home compared to white students.

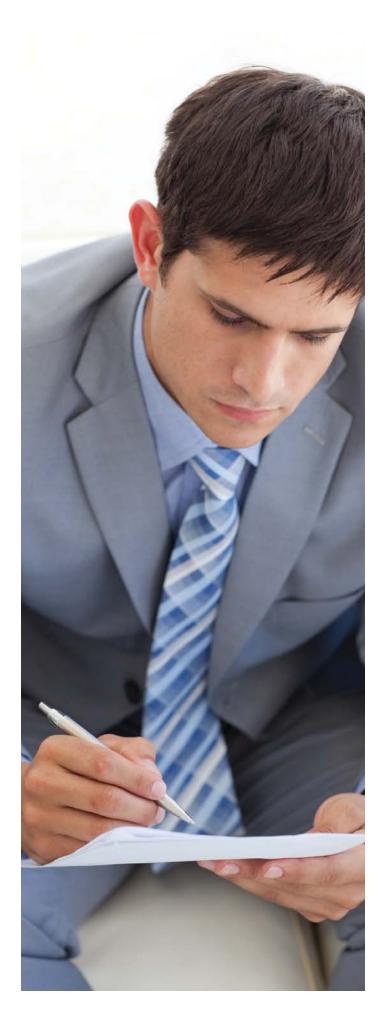
Graduates who performed in the highest CLA quintile in their senior year in college were more likely married or cohabiting and doing so with an individual they met at college than students in the bottom quintile of CLA performance (Figure 6). Nearly 20 percent of those respondents who performed in the top quintile of the CLA reported being married or cohabiting while only 11 percent from the bottom quintile did. More than half of the graduates from the top CLA guintile were married or cohabiting with a partner from college. Graduates in the highest CLA quintile were also more likely renting with college friends or a partner. These findings suggest that, for recent college graduates, academic engagement/growth and performance is associated with post-college living arrangements, which potentially are related to employment and financial circumstances.

Figure 6. Marriage/Cohabitation and Romantic Partner from College, by CLA Performance



Conclusion

THESE FINDINGS REINFORCE
THE IMPORTANCE OF RIGOROUS
EDUCATIONAL EXPERIENCES
AS WELL AS THE COMMITMENT OF
PRACTITIONERS AND POLICYMAKERS
TO FOCUS ON IMPROVING THE
QUALITY OF HIGHER EDUCATION.



Our findings arrive at a unique time of economic crisis in the United States. The individuals in our study graduated from college and began their job search during the toughest labor market in decades. Despite having graduated "on time" from four-year colleges and universities, a high percentage of graduates reported being unemployed. In addition, our findings reveal the difficult financial situation that many college graduates are experiencing today, in part reflected in the high levels of student loan debt. Our study highlights the strong association between educational experiences and life-course outcomes, particularly labor market outcomes, financial circumstances and civic engagement. These findings reinforce the importance of rigorous educational experiences as well as the commitment of practitioners and policymakers to focus on improving the quality of higher education.

The descriptive findings for academic engagement/ growth and performance suggest the need for further multivariate analysis where associations of these factors with life-course outcomes are estimated after controlling for prior individual-level differences. In addition, future reporting of in-depth interviews on qualitative dimensions of these graduates' experiences will shed further light on the difficulties current graduates face in making a range of different transitions after college as well as the relationship between educational experiences and life-course outcomes.

Methodological Appendix

Presented analyses are based on the Determinants of College Learning (DCL) dataset. The dataset began with a cohort of freshmen entering four-year institutions in the fall of 2005. The respondents were followed through their college careers, with results reported in Academically Adrift: Limited Learning on College Campuses and related reports. Students who participated in the 2009 wave of data collection (typically during their senior year) were contacted for follow-up surveys in 2010 and 2011. Once respondents signed new consent forms for this phase of the project, they were administered the survey electronically. The surveys were conducted by Harris Interactive and contain information regarding a range of post-college experiences, including respondents' labor market outcomes, continuing education information, civic engagement and social networks. 967 respondents completed the survey in 2011. The sample in this report is restricted to 925 respondents who completed a bachelor's degree by the time of the survey. The majority (86 percent) of respondents completed their bachelor's degrees by 2009 and these individuals were thus surveyed approximately two years after completing their degrees. In addition, 13 percent of graduates completed their bachelor's degrees in 2010 and 1 percent in 2011.

The DCL sample continues to include a range of institutions from all four regions of the country, of varying sizes, selectivity, and missions, from liberal arts colleges and large research institutions to a number of Historically Black Colleges and Universities (HBCU's) and Hispanic Serving Institutions (HSI's). Moreover, the sample represents recent college graduates across the nation reasonably well along several key dimensions. Table 1 reports selected demographic characteristics and post-college outcomes of the DCL sample, compared to a nationally representative sample from the Beginning Postsecondary Students (BPS) Longitudinal Study, 2003-2004 cohort. To synchronize the comparison, the BPS sample is restricted to students who were 19 years old or younger by December 31, 2003, and who initially enrolled in a four-year institution. The sample is also restricted to students who completed bachelor's degrees by the last survey wave, approximately six years since entry into higher education (which is the same

time-frame as the DCL sample). It is worthwhile to note that among our college graduates 86 percent completed their bachelor's degrees within four years, while in the BPS sample only 71 percent did so. Consequently, our sample includes a larger proportion of students who graduated within four years, which may explain some of the differences observed in Table 1.

Women are overrepresented in our sample at 71 percent, compared to 56 percent in the BPS sample. Moreover, our respondents had slightly more educated parents, with 41 percent of respondents having parents with professional/graduate degrees, compared to 34 percent in the BPS sample. The proportion of white vs. nonwhite respondents and respondents for whom English was not the primary language growing up are similar in the two samples, as is college GPA, with students in both DCL and BPS samples leaving college attaining or approaching a "B+" average cumulative GPAs. After college, labor market outcomes of college graduates in the BPS and DCL samples are remarkably similar, including unemployment, full-time employment and income. A higher proportion of students in the DCL sample, however, report attending graduate school. At the same time, a higher proportion of students in the national sample report being married (14 percent compared to 8 percent in our sample) as well as living at home (29 percent compared to 24 percent in our sample). While there are some differences across the samples, overall, there are many similarities, with students in our sample in many respects approximating characteristics of the national sample.

We describe students' post-college experiences separately for different groups based on their sociodemographic backgrounds and academic experiences and performance, including: gender, race/ethnicity, parental education, college major, college selectivity, 2009 CLA score quintiles and academic engagement/growth. We used t-tests adjusted for clustering of students within institutions to identify statistically significant differences across groups. *Race/ethnicity* is divided into five categories: white (reference), African-American, Asian, Hispanic, and other racial/

ethnic groups. Parental education corresponds to the highest degree attained by either parent and is categorized into high school or less (reference), some college (includes associate and technical degrees), bachelor's degree, and graduate/professional degree. College major indicates students' self-reported major at the time of graduation, aggregated into the following broad categories: Business (reference), Education/Social Work, Engineering/Computer Science, Communications, Health, Social Science/Humanities, Science/Math, and Other. College selectivity is a measure of the average combined math and verbal SAT scores (on the 1,600 scale) at the 25th percentile for the incoming freshman class at each institution. Data on SAT scores were obtained from the Integrated Postsecondary Education Data System (IPEDS) database. Institutions were separated into three categories: highly selective, selective, and less selective. Highly selective colleges and universities are defined as institutions with students scoring higher than 1,150 on their combined SAT at the 25th percentile; less selective colleges are defined as schools with students scoring lower than 950 on their combined SAT at the 25th percentile. Selective schools fall between these cutoffs. The CLA measure represents students' scores on the performance task of the Collegiate Learning Assessment (CLA) in their senior year in college (i.e., spring 2009). This variable is divided into quintiles, with the cutoff scores differing from previous reports since they are based on respondents who participated in the 2011 follow-up survey. The top quintile includes students who scored 1,403 or higher on the CLA task assessment. The bottom quintile includes those who scored 1,076 or less. The middle three quintiles include all students whose scores fall between those two cutoff scores.

Academic engagement/growth is a summary measure based on students' demonstrated growth on the CLA during college, courses taken with reading and writing requirements, and hours studied. Demonstrated growth on the CLA represents students who gained more than 9.7 points on the CLA scale between 2005 and 2009 (i.e., freshman and senior years in college); reading and writing requirements indicate whether students took more than five courses during their time in college where they reported reading more than 40 pages a week and writing more than 20 pages in a semester; hours studied reflects students' reports of the number of hours spent studying alone in a week. The high academic engagement/growth category includes students who showed demonstrated growth on the CLA, took more than five reading and five writing courses, and studied alone 10 or more hours per week. Low engagement/growth category includes

students who did not show demonstrated growth on the CLA, took less than 5 reading and 5 writing courses, and studied alone 5 hours or less per week. The middle category includes all other possible combinations of students' CLA performance and those academic experiences.

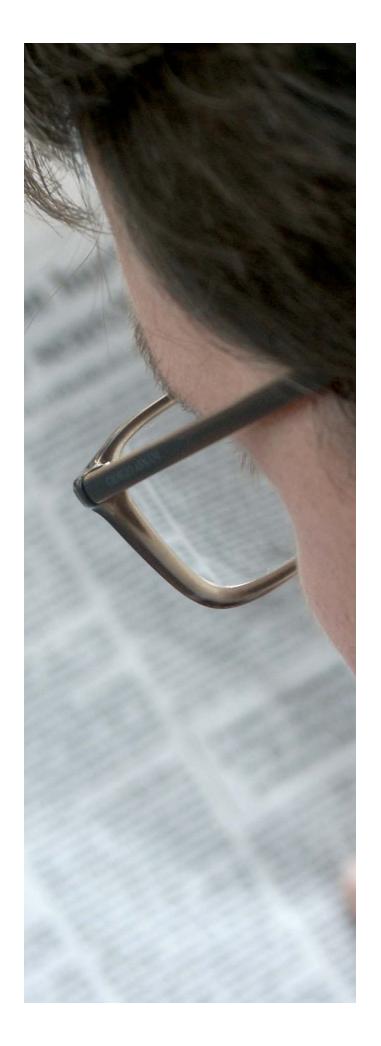
Table 2 presents employment and enrollment patterns of recent college graduates, divided into four categories: employed full-time (working 35 or more hours per week), employed part-time (less than 35 hours per week), unemployed, and attending graduate school full-time. Respondents not enrolled in graduate school full-time are classified as working full-time, working part-time or unemployed. Average income for full-time employed graduates and unemployment rate of those in the labor force are also reported in Table 2.

Table 3 reports the percentage of college graduates with different types of debt and financial support, as well as the amount of debt owed or financial support received. Information on college loans is based on students' responses to the following questions: "Did you take out any student loans to help pay for your bachelor's degree?" And "If yes, how much are you currently in debt, i.e., how much do you owe in the form of student loans?" Information on credit card debt is based on the following question: "Currently, about how much in total do you owe on credit cards?" And financial assistance from parents is based on the prompt: "Please indicate how much financial help you have received from your parent figures or other adult relatives during the past 12 months (e.g., have your parents or relatives helped you with schooling expenses, buying a car, emergencies such as being out of work, sick or injured, given you money to make a down payment on a house, provided you your own place to stay by covering the rent or given you other large financial or valuable gifts)?" We report the percentage of students who received any help and the amount of help received among those who received financial assistance from parents. The response categories for questions regarding amount of college loans, credit card debt, and financial assistance from parents included ranges of \$10,000. We re-coded each of these variables into a continuous measure by using the average for each category. We also asked students about their current living situation and report the percentage of students who are living with their parents or relatives. Moreover, from those who are living at home, we created a subcategory of those who either lived on campus or off campus independently during college, and have returned home since graduation. In Table 4, we examine the various types of mechanisms recent graduates with full-time jobs (who are not enrolled

full-time in graduate school) utilized to find their current positions of employment. The survey item asked participants how they found their jobs. The responses were collapsed into five categories: college social networks (i.e., friends from college), college institutional mechanisms (i.e., college personnel or career placement center), employment agency/ad, prior job (i.e., former employer, company transfer, or networking on a job), and other. In addition, we asked respondents whether their employers asked to see their college transcripts when they were being hired.

Table 5 explores the civic engagement of recent graduates by frequency of reading the news, discussing politics and public affairs as well as volunteering. Respondents were asked how often they read the newspaper either online or in print; response categories included "daily," "weekly," "monthly," and "I don't read newspapers." They were also asked how often they discuss politics and public affairs with family and friends (either in person, by phone or via the Internet); response categories included "every day," "at least once a week," "at least once a month," and "less than once a month." In addition, participants were asked how many hours in a month on average they participated as volunteers. These measures are recoded as dummy variables to indicate those who read news and discuss politics and public affairs daily or weekly. The volunteer measure indicates whether or not an individual volunteers some amount of time in an average month.

Table 6 reports college graduates' personal relationships (focusing in particular on relationships originating in college) and living arrangements. Participants were asked to indicate their current living situation. Response categories included "owning," "renting on my own," "renting with my partner/spouse," "renting with college friends/roommates," "renting with friends/roommates other than those met in college," "living with parents or relatives," and "other." The percentage of graduates who reported living with parents/relatives is presented in Table 3. In Table 6, we focus on the percentage of graduates who reported renting with college friends or college partners. Moreover, respondents were asked their current relationship status, represented by four categories: married, cohabiting, in a serious romantic relationship, or single. For participants who were in a relationship (i.e., not single), we asked where they met their spouses/ partners and report the percentage who met their spouses/partners in college.



METHODOLOGICAL APPENDIX 19

Table 1.

Characteristics and post-college experiences of college graduates in the DCL and BPS samples

	DCL SAMPLE	BPS SAMPLE
BACKGROUND CHARACTERISTICS		
Gender Female	0.74	0.50
Male	0.71	0.56
Race/ethnicity	0.29	0.44
White	0.72	0.74
African-American	0.13	0.07
Hispanic	0.04	0.08
Asian	0.08	0.07
Other	0.04	0.05
English not primary language	0.09	0.09
Parental education High school or less		
Some college	0.12	0.15
	0.19	0.20
Bachelor's degree	0.29	0.31
Professional/graduate degree	0.41	0.34
College GPA	3.33	3.22
POST-COLLEGE EXPERIENCES		
Currently enrolled in graduate school	0.40	0.26
Currently enrolled in graduate school full-time	0.31	0.07
Unemployed (not enrolled in graduate school)	0.07	0.07
Employed full-time (not enrolled in graduate school)	0.76	0.76
Income (working full-time, not enrolled in graduate school)	34,872	37,530
Marital Status		
Married	0.08	0.14
Not-married Single	0.92 0.51	0.86
Cohabiting Serious relationship	0.09 0.32	
Living with parents	0.24	0.29
	V.L.	

Note: Determinants of College Learning (DCL) dataset and the Beginning Postsecondary Students (BPS) Longitudinal Study are restricted to traditional-age students who entered four-year institutions in the Fall of 2005 (DCL) or during the 2003-2004 academic year (BPS) and completed bachelor's degrees within six years of entry.

Table 2.

Percentage of college graduates in different employment and enrollment categories, by selected characteristics (2011)

	EMPLOYED FULL-TIME	EMPLOYED PART-TIME®	UNEMPLOYED ^a	ENROLLED FULL-TIME	INCOME FOR FULL-TIME EMPLOYED ⁵	UNEMPLOYED
All	52.53	11.97	4.35	31.45	34,872	6.90
Gender					(15,709)	
Male	53.70	10.37	5.56	30.37	39,214 ** (17,550)	8.15
Female [†]	51.62	12.63	3.85	31.90	33,012 (14,486)	6.38
Race/ethnicity African-American	48.28	11.21	5.17	35.34	37,727	9.46
Asian	48.61	13.89	5.56	31.94	(17,997) 32,879	10.20
Hispanic	37.50**	28.13**	9.38	25.00	(17,457) 25,833 *	12.50
White [†]	52.89	11.40	3.95	31.76	(9,003) 34,970	6.09
Other	74.29 [†]	5.71	0.00	20.00	(15,126) 34,231 (17,871)	0.00
Parental education HS or less [†]	44.86	14.95	5.61	34.58	38,696	8.57
Some college	52.54	12.43	5.65	29.38	(18,179) 35,330	8.13
Bachelor's degree	57.31*	8.46*	4.23	30.00	(14,177) 34,864	6.63
Professional/graduate degree	50.67	13.21	3.23	32.88	(15,438) 33,453 ^t (15,841)	5.71
College Selectivity Less selective college [†]	55.95	13.10	4.76	26.19	32,419	8.06
Selective college	50.43	10.99	4.74	33.84 ^t	(16,740) 37,203 *	7.57
Highly selective college	53.17	12.68	3.17	30.99	15,037 32,740 (15,659)	4.69
College Majors Business [†]	71.13	10.31	2.06	16.49	37,794	3.66
Education/Social Work	63.49	7.94	11.11*	17.46	(15,146) 28,500**	13.46*
Engineering/Computer Science	63.29	3.80	3.80	29.11 *	(11,886) 50,625 **	5.45
Communications	67.50	10.00	5.00	17.50	(15,697) 32,037 ^t	8.82
Health	53.85	9.62	1.92	34.62 *	(12,346) 40,714	3.03
Social Sciences/Humanities	48.47*	15.03 ^t	4.60	31.90 **	(17,728) 32,200*	6.88
Science/Math	36.69*	13.02*	1.78	48.52 **	(14,933) 31,721 *	4.76
Other	49.43 ^t	12.64	6.90 ^t	31.03 *	(15,025) 30,238 **	10.00
Academic engagement/growth Low [†]	60.00	8.57	5.71	25.71	(11,313) 34,024	7.84
Medium	51.94 ^t	12.36 ^t	4.31	31.39	(14,458) 35,055	6.95
High	48.72	11.97	3.42	35.90	(15,924) 35,000	5.41
2009 CLA quintile Bottom quintile [†]	50.84	12.29	5.59	31.28	(15,725) 35,000	9.60
Middle (3) quintiles	51.66	11.62	4.61	32.10	(14,453) 34,741	7.16
Top quintile	55.50	12.57	2.09 ^t	29.84	(16,048) 35,097 (16,179)	3.08 *
Total N	919	919	919	919	467	623

Note: 6 cases were excluded from this analysis that did not fall into one of the employment/enrollment status categories.

 $^{^{\}dagger}\text{Comparison category}$

^a Individuals assigned to this category only if not enrolled full-time in graduate school

^b Analysis restricted only to those in full-time employment

[°]Analysis restricted to those in the labor market (i.e., excluding those full-time enrolled in graduate school)

^t p<.10, *p<.05, **p<.01

Table 3. Percentage of college graduates with different types of debt and financial support, by selected characteristics (2011)

	COLLEGE LOANS ^a	MEAN COLLEGE LOANS ^a	CREDIT CARD DEBT	MEAN CREDIT CARD DEBT ^b	PARENTAL FINANCIAL ASSISTANCE	MEAN PARENTAL FINANCIAL ASSISTANCE°	LIVING AT HOME	MOVED BACK HOME
All	64.89	27,194 (17,529)	45.54	1,880 (2,573)	73.83	5,104 (6,863)	23.91	21.91
Gender		(,/		(=,-:-)		(-,)		
Male	58.36**	26,622	47.73	1,726	75.48	4.794	19.48*	15.79**
		(17,576)		(2,603)		(6,445)		
Female [†]	67.59	27,406 (17,529)	44.65	1,948 (2,562)	73.16	5,235 (7,034)	25.73	24.39
Race/ethnicity		(, /		(, ,		(, ,		
African-American	73.50*	28,647 (18,571)	57.39**	2,095 (1,605)	66.37 ^t	5,000 (6,813)	35.34**	33.94**
Asian	62.86	18,824** (12,064)	50.00	1,765 (3,465)	79.41	8,074** (9,151)	33.33**	28.79*
Hispanic	68.75	24,524 (12,440)	59.38 ^t	2,842 ^t (2,517)	62.50	2,425 ^t (2,290)	43.75**	30.43
White [†]	63.58	27,753	42.42	1,751	74.73	4,918	19.45	18.56
Othor	63.89	(17,757)	10.06	(2,567)	00.05	(6,648)	00.00*	00.10
Other	03.09	27,381 (18,683)	42.86	2,583 (3,791)	82.35	5,357 (6,788)	33.33*	28.13
Parental education		00 700	50.05	0.400		E 40 E		
HS or less [†]	74.77	29,730 (16,898)	53.85	2,406 (3,215)	62.75	5,195 (6,810)	25.71	21.28
Some college	77.97	26,308 (16,490)	52.27	2,253 (3,072)	72.67 ^t	4,760 (6,426)	36.16 ^t	33.97*
Bachelor's degree	70.34	27,343 (18,653)	45.56	1,845 (2,303)	76.45 **	4,490 (6,398)	23.28	22.00
Professional/graduate degree	51.76**	26,566 (17,511)	39.62**	1,498* (2,095)	75.90 **	5,714 (7,375)	17.74 ^t	16.53
College Selectivity		, , ,		(, ,		(, ,		
Less selective college [†]	71.60	28,025 (18,066)	50.00	1,991 (2,648)	77.44	4,768 (6,169)	27.81	26.80
Selective college	63.30 ^t	25,925 (17,296)	47.39	2,075 (2,541)	71.15	5,859 (7,476)	27.74	24.82
Highly selective college	63.48 ^t	28,758	39.64*	1,441	76.17	4,190	15.19**	14.89**
College Majors		(17,520)		(2,566)		(6,165)		
Business†	68.37	24,655	62.11	2,021	71.58	5,537	26.53	23.53
E 12 /0 1 104	70.00	(17,164)	50.45	(2,975)	70.00	(7,598)	0.4.00	04.07
Education/Social Work	73.02	27,667	56.45	2,057	73.33	4,750	34.92	31.67
Engineering/Computer Science	50.63*	(16,976) 20,128	41.03**	(2,179) 1,445	55.84 *	(6,766) 5,535	15.38 ^t	9.59*
Communications	68.29	(14,303) 24,615	36.59**	(1,738) 2,933	82.50	(7,782) 3,742	31.71	30.77
		(15,095)		(4,180)		(6,225)		
Health	71.15	29,595 (18,498)	42.86*	3,238 (4,655)	72.55	5,446 (7,389)	3.92**	4.65**
Social Sciences/Humanities	64.94	29,293 [†] (18,192)	46.13**	1,770 (2,270)	77.04	4,702 (5,975)	24.09	23.10
Science/Math	63.25	28,158 (18,350)	36.09**	1,635 (2,432)	73.21	6,459 (8,145)	24.12	19.62
Other	66.67	25,182	45.35*	1,615	79.52	4,318	28.24	29.63
Academic engagement/		(16,158)		(1,586)		(5,980)		
Academic engagement/growth Low^\dagger	71.43	27,128	55.88	2,349	66.18	5,800	27.14	22.58
Medium	65.24	(18,408) 27,230	45.75	(2,962) 1,764	74.65	(7,844) 5,135	24.52	22.93
High	59.48	(17,763) 26,000	38.39*	(2,308) 2,488	74.34	(6,926) 4,863	18.10	15.32
-		(15,037)		(3,879)	-	(6,117)	-	
2009 CLA quintile Bottom quintile [†]	69.40	27,149	50.84	1,995	75.44	4,198	34.81	32.93
·		(17,522)	00.01	(2,006)	. 5. 1 1	(6,189)	3	
Middle (3) quintiles	64.81	26,132 (16,998)	46.73	1,858 (2,573)	72.56	5,301 (6,917)	22.51**	20.44**
Top quintile	61.58	30,421 (18,898)	37.23**	1,857 (3,228)	76.06	5,535 (7,329)	17.89**	16.39**
Total N	920	547	909	414	898	663	920	858
1014111	520	371	303	717	030		320	

[†]Comparison category

^aRestricted to college graduates who reported borrowing to pay for college

^bRestricted to college graduates who reported having credit card debt

 $^{^\}circ$ Restricted to college graduates who reported receiving parental assistance t p<.10, *p<.05, **p<.01

<u>Table 4.</u>
Percentage of full-time employed college graduates using various job search mechanisms, by selected characteristics (2011)

	COLLEGE SOCIAL NETWORKS	COLLEGE INSTITUTIONAL MECHANISM	EMPLOYMENT AGENCY/AD	PRIOR JOB	OTHER	EMPLOYER ASKED FOR TRANSCRIPT
All	8.53	14.71	30.92	13.65	32.20	37.37
Gender Male	12.68*	23.94**	19.72**	11.97	31.69	39.86
Female [†]	6.73	10.70	35.78	14.37	32.42	36.28
	0.70	10.70	33.70	14.07	02.42	30.20
Race/ethnicity African-American	5.45	16.36	38.18	9.09	30.91	41.82
Asian	5.88	14.71	35.29	20.59	23.53	38.24
Hispanic	8.33	0.00	41.67	16.67	33.33	18.18
White [†]	9.12	15.00	28.82	13.82	33.24	36.48
Other	12.00	16.00	24.00	12.00	36.00	38.46
Parental education HS or less [†]	12.77	14.89	25.53	12.77	34.04	43.75
Some college	4.49 ^t	19.10	32.58	13.48	30.34	37.50
Bachelor's degree	11.03	9.66	35.17	17.24	26.90	36.73
Professional/graduate degree	7.53	16.13	27.96	11.29	37.10	35.48
College Selectivity Less selective college [†]	8.79	6.59	39.56	12.09	32.97	41.30
Selective college	6.55	16.59*	29.69 ^t	13.10	34.06	34.35
Highly selective college	11.49	16.89*	27.03*	15.54	29.05	39.19
College Majors						
Business†	14.71	16.18	26.47	8.82	33.82	33.33
Education/Social Work	7.69	5.13 [†]	43.59 ^t	5.13	38.46	51.28 ^t
Engineering/Computer Science	4.17 ^t	29.17 ^t	27.08	10.42	29.17	53.06*
Communications	3.70	3.70	25.93	37.04**	29.63	14.81 ^t
Health	10.71	7.14	32.14	17.86	32.14	39.29
Social Sciences/Humanities	9.09	13.64	27.27	15.58	34.42	33.99
Science/Math	8.20	19.67	29.51	13.11	29.51	42.62
Other	4.88	14.63	43.90 ^t	9.76	26.83	28.57
Academic engagement/growth Low [†]	7.14	7.14	40.48	11.90	33.33	42.86
Medium	9.07	13.74	30.22	13.74	33.24	34.70
High	7.14	28.57**	23.21 ^t	16.07	25.00	50.00
2009 CLA quintile Bottom quintile [†]	4.65	12.79	34.88	12.79	34.88	42.05
Middle (3) quintiles	9.78	13.77	30.07	14.13	32.25	36.96
Top quintile	8.65	19.23	27.88	13.46	30.77	33.65
Total N	469	469	469	469	469	471

Note: This analysis is restricted to respondents who are not enrolled full-time in graduate school and are employed full-time. † Comparison category

^t p<.10, *p<.05, **p<.01

Table 5.

Percentage of college graduates who are civically engaged, by selected characteristics (2011)

	READS NEWS	DISCUSSES POLITICS AND PUBLIC AFFAIRS	VOLUNTEERS
All	67.90	60.78	54.21
Gender Male	77.99 **	69.14**	50.59
rviale Female [†]			
	63.76	57.34	55.68
Race/ethnicity African-American	59.83 ^t	56.78	62.04
Asian	76.39	61.11	50.75
Hispanic	62.50	50.00	34.38*
White [†]	68.59	61.82	54.82
Other	72.22	62.86	45.45
Parental education HS or less [†]	55.66	46.23	44.12
Some college	64.97	52.54	53.85
Bachelor's degree	67.80 *	65.91**	57.60 *
Professional/graduate degree	72.78**	65.69**	54.93 ^t
College Selectivity Less selective college [†]	56.55	48.52	52.56
Selective college	64.03 ^t	54.91	53.90
Highly selective college	80.99**	78.09**	55.72
College Majors			
Business [†]	76.29	60.20	43.96
Education/Social Work	58.73*	49.21	70.00 **
Engineering/Computer Science	64.56 ^t	53.16	52.78
Communications	73.17	70.73	43.90
Health	52.94 **	45.10 ^t	45.83
Social Sciences/Humanities	71.04	66.67	53.50
Science/Math	64.71 *	59.65	60.61 *
Other	70.11	60.92	56.10
Academic engagement/growth Low^\dagger	66.67	52.86	58.21
Medium	66.34	60.08	52.98
High	81.03*	71.79**	60.18
2009 CLA quintile Bottom quintile [†]	60.00	54.95	54.17
Middle (3) quintiles	69.67*	60.41	54.34
Top quintile	71.20 *	67.54*	54.05
Total N	922	923	878

[†]Comparison category † p<.10, *p<.05, **p<.01

Table 6.

Percentage of college graduates in different types of romantic relationships and living arrangements, by selected characteristics (2011)

	MARRIED OR COHABITING	SERIOUS RELATIONSHIP	MARRIED OR COHABITING FROM COLLEGE®	SERIOUS RELATIONSHIP FROM COLLEGE ^b	RENTING WITH COLLEGE FRIENDS	RENTING WITH COLLEGE FRIENDS OR COLLEGE PARTNER
All	16.91	32.15	41.83	39.10	13.37	20.65
Gender Male	11.79**	29.28	61.29*	53.95**	17.60*	24.72t ^t
Female [†]	19.00	33.33	36.89	33.80	11.64	18.99
Race/ethnicity African-American	8.55**	29.06	50.00	36.36	9.48	13.79 *
Asian	14.08	28.17	20.00	30.00	12.50	16.67
Hispanic	25.00	28.13	50.00	11.11 ^t	0.00*	15.63
White [†]	18.29	33.02	41.53	41.98	14.74	22.34
Other	14.71	35.29	60.00	41.67	13.89	25.00
Parental education HS or less [†]	16.19	34.29	29.41	37.14	10.48	16.19
Some college	16.18	37.57	32.14	41.54	10.73	16.38
Bachelor's degree	18.08	28.85	46.81	28.38	14.12	23.66
Professional/graduate degree	16.80	30.85	45.90	46.43	14.78	21.77
College Selectivity Less selective college [†]	14.37	32.93	58.33	36.36	10.65	20.12
Selective college	20.48 ^t	30.28	32.98*	36.23	12.90	18.71
Highly selective college	12.68	34.06	54.29	46.24	15.55	24.03
College Majors Business [†]	17.71	29.17	41.18	32.14	10.20	15.31
Education/Social Work	20.63	34.92	30.77	22.73	7.94	14.29
Engineering/Computer Science	13.33	32.00	60.00	52.17	11.54	19.23
Communications	14.63	39.02	50.00	25.00	17.07	24.39
Health	35.29*	31.37	44.44	46.67	17.65	39.22**
Social Sciences/Humanities	15.84	31.37	45.10	44.55	13.41	21.34
Science/Math	14.46	32.53	29.17	38.89	16.47	21.18
Other	14.12	31.76	41.67	37.04	11.76	16.47
Academic engagement/growt Low^{\dagger}	h 20.29	33.33	14.29	34.78	12.86	15.71
Medium	16.76	31.13	42.86*	37.73	14.27	21.47
High	15.79	35.09	55.56*	51.28	7.76	18.97
2009 CLA quintile Bottom quintile [†]	10.56	36.67	26.32	35.38	12.15	15.47
Middle (3) quintiles	18.16*	30.15	40.21	38.13	13.28	20.85
Top quintile	19.02*	32.61	54.29*	46.67	14.74	25.26*
Total N	905	905	153	289	920	920

[†]Comparison category

^aRestricted to college graduates who are married or cohabiting

^b Restricted to college graduates in a serious relationship

^t p<.10, *p<.05, **p<.01

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