Surviving the Gauntlet: Adult Undergraduates in American Higher Education

David Bernard Monaghan

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THE CITY UNIVERSITY OF NEW YORK
Abstract

SURVIVING THE GAUNTLET: ADULT UNDERGRADUATES IN AMERICAN HIGHER EDUCATION

by

David B. Monaghan

Adviser: Professor Paul Attewell

In modern American higher education, people ages twenty-five and older account for nearly forty percent of all undergraduates. Though neglected by scholars, these students and their experiences are both important in their own right and can help shed light on the broader world of non-elite postsecondary education. In this dissertation, I combine qualitative and quantitative methods to address central questions relating to college-going among adults. I draw on data from a nationally-representative longitudinal study (the National Longitudinal Survey of Youth, 1979 cohort) and from in-depth interviews with thirty-six adult undergraduates in order to explore factors that lead students to drop out of college and to enroll at older ages. I utilize sequence analysis techniques to investigate the impact of non-standard college-going patterns on other aspects of the transition to adulthood, event history analysis to identify the proximal and distal correlates of adult enrollment, and both fixed-effects and marginal structural models to estimate the impacts of college participation and completion in adult years on wages and benefits. My study indicates that a substantial portion of adults are motivated to attend college because of insecurity or poor conditions in the non-baccalaureate labor market, but that adults who do enroll tend to benefit by doing so, and that women in particular benefit substantially from completing a bachelor’s degree past age twenty five.
Acknowledgements

The writing of a dissertation is a long affair, sometimes exciting, sometimes arduous, fraught with uncertainty and beset by unexpected complications. In order to bring this effort to completion, I drew upon the help of many people. Most importantly, Paul Attewell offered unlimited advice, guidance, and support throughout the writing process, and before and afterwards as well. I could also count on the invaluable advice and insight from Janet Gornick and Mary Clare Lennon. All graduate students should be so fortunate as to have a dissertation committee made up of such examples of expertise and generosity as Drs. Attewell, Gornick, and Lennon. I also would like to acknowledge the following individuals for offering advice and encouragement, or for simply lending an ear when I needed to vent: Kevin Moran, Sara Martucci, CalvinJohn Smiley, Melanie Lorek, Wenjuan Zheng, Dirk Witteween, Peter Ikeler, and Darren Kwong. And last but certainly not least, I would like to acknowledge the endless patience, intellectual engagement, and steadfastness of my wife, Melinda Chang, without whom I may still have written this dissertation, but would have been much less happy while so doing.
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Chapter 1

Adult Undergraduate Enrollment: Who Returns to School and Why?

The term “college students” evokes a number of images – of young people walking with to class across green quadrangles, their late nights spent studying in the library, their drunken parties in the basements of filthy fraternity houses, and their conversations stretching late into the night in dorm rooms. But this image of college is of a life experienced by a shrinking minority of college-goers. As college enrollment has expanded over the past sixty-five years, higher education has changed radically, both in terms of the manner in which it is delivered and experienced and in who is experiencing it. A minority of college-goers today lives on campus, and the majority attend schools where living on campus is rare to unknown (Attewell & Lavin 2012). Over 40% of all undergraduates attend community colleges, and a rapidly increasing number attend for-profit schools. Meanwhile, the collegiate population has become more diverse than ever previously. And this includes not only racial or ethnic diversity, but diversity according to socioeconomic status, family structure, attendance patterns, and age. Indeed, today, 45% of undergraduates work at least 25 hours per week, 16% have children, and nearly 40% are aged 25 or older. Putting all of this together leads to the realization that the ‘traditional college student’ - usually described as a student who enters college immediately after high school, who attends one institution full-time until completion, and who is primarily oriented towards the student role - is now decidedly in the minority in higher education.

This transformation has been largely overlooked in scholarship on higher education, which retains its traditional focus on “traditional” undergraduates. Major recent quantitative studies (e.g. Arum & Roksa 2011, Massey et al. 2011), provocative ethnographic works (e.g. Armstrong & Hamilton 2013; Stevens 2009), and influential theoretical models (e.g. Astin 1984; Tinto 1975, 1987) tend not only

1 Author’s estimates from the National Postsecondary Student Aid Survey, 2011-12 (NPSAS:12) (NCES, 2013).
to focus exclusively on traditional college students at a four-year residence campuses, but to leave the unrepresentative nature of this focus unmentioned. One reason for this, one suspects, is that most leading higher education scholars are themselves isolated from these larger trends through their position at elite universities. The transformation of higher education has taken place specifically outside of these institutions, as I describe below, and from the vantage point of an elite private school or even a competitive public flagship it may appear that little has changed. Also, doubtless most higher education scholars themselves attended traditional residential schools at traditional ages, surrounded nearly exclusively by other traditional college students. They, like the public at large, may be under the illusion that this experience, their experience – which is, simply put, an elite experience – is representative of what college is like for most college-goers. As a result of this misconception, non-traditional students are, in higher education scholarship, “a marginalized majority” (Deil-Amén 2012).

Adult college-goers, who are the subject of this dissertation, are, like other “non-traditional” students, dramatically under-studied. A review of the over 3,200 articles published in seven major higher education journals between 1990 and 2003 located only 41 studies of adult undergraduates (Donaldson & Townsend 2007). And when they are studied, adult students are frequently conceptualized as a problem, as deficient or as diverging from the traditional student norm in some unfortunate manner (Donaldson & Townsend 2007; Kasworm 1990). Sissel, Hansman, & Kasworm (2001) observe that adult students are “often judged to be fragmented learners who cannot devote sufficient time, energy, and resources to intellectual engagement” and are thus “apart from the collegiate world of young adult development” (P. 25). James describes the predominant research orientation towards adult students as the “species approach”, in which adults are as a group presumed share “certain social characteristics which locate them in relation to other students” (James 1995). Despite some promising older research (Cross 1981; Quinnan 1997) and a large specialist education literature, mainstream social scientists have not seemed to come to terms with the notion that older
students are a large and likely a permanent feature of American higher education. Nor have they sufficiently entertained the notion that this population is neither internally homogenous nor intrinsically different from younger students.

This dissertation will focus on adult undergraduates as a means of shedding light on the broader universe of non-elite higher education and “non-traditional students”. Adult students, whom I define as individuals aged 25 or older who do not have a bachelor’s degree and are enrolled in a higher educational institution, are particularly well-suited for this purpose for two reasons. The first is practical: the category of adult undergraduate is conceptually precise and definable in positive terms. By contrast, the category of non-traditional student is amorphous and ultimately purely negative (Schuetze & Slowey 2002). Researchers generally proceed by first defining the “traditional student”, and then by grouping all those who do not fit these criteria under the rubric of “non-traditional”2. While effective for demonstrating certain points (e.g. Deil-Amen 2012), this approach provides a researcher with an unappealing lack of analytical traction. However, adult students have many characteristics which land students in the ‘non-traditional’ bin: they are disproportionately from poorer backgrounds; many delayed college enrollment and/or interrupted it after beginning; they are mostly commuter students and are disproportionately enrolled part-time; they are highly likely to have substantial competing responsibilities, such as dependent children and full-time employment; many struggled academically in the past and retain the scars of this prior academic failure; and they disproportionately attend community colleges and are rarely to be seen at elite institutions. Thus, through studying adult

2 The lack of agreement in the definition of “non-traditional” is truly stunning given its wide use. Kim (2002), summarizing prior research, notes that “non-traditional students” are variously classified on the basis of age, background characteristics (such as being a first-generation college-goer) or engaging in “risk behaviors” such as working full-time or delaying completion for more than a year after high school. For Schutze and Slowey (2002), patterns of attendance are the determining factor – so delayed enrollment, interrupted enrollment, part-time attendance, and having other major commitments all lead to a “non-traditional” classification. Apling (1991) identifies non-traditional students as those who are financially independent, part-time, older than 24, lacking a high school diploma, or single parents. For Choy (2002), the definition applies to students who: delay enrollment, attend part-time, work full-time, are financially independent, have dependents other than a spouse, are single parents, or don’t have a high school degree.
students, we study a group whose experience of higher education is, perhaps, reflective of all those who are taking the “difficult” road to the college degree.

Adult students are also particularly important for understanding the transformation of higher education because they challenge more fundamentally the boundaries which this sector uses to define itself. Adult students do not experience college as a distinct life-stage, one set off from both earlier compulsory schooling and from work. Rather, they merge school and work at once, and weave in and out from one world to the other over time. For this reason, adult students clearly pose a challenge to the notion that the student role is typically, or ought to be, primary and all-encompassing. Adult students can experience college as transformative, but not because they are encapsulated within it as a total institution. Instead, college is, in their lives, one domain among many, and typically not the most profound for their identity or demanding of their time and energy. The expansion of higher education has ironically led college to be more impactful on society in aggregate while it is less impactful, on average, on the lives of the individuals who are engaged in it.

Finally, adult students and adult educational participation are essential to study because college is simply not isolated to youthful ages. This is especially true of disadvantaged students. Attewell and Lavin (2007), studying the impacts of open admission in the City University of New York, found that though 50% of enrollees eventually completed degrees, a large proportion did so long after initially enrolled. Among black and Latin students, the mean time to complete a degree was 10 and 11 years respectively. Moreover, time to degree has increased since the 1970s on average (Bound & Lovenheim 2012), and an increasing proportion of degrees are earned after 25 (Turner 2004). Typical studies, which limit themselves to traditional-aged students and to the first six years after initial enrollment, will underestimate overall attainment and are increasingly ill-suited to describe what is happening in higher education.
Before I move on, I want to say word about the adult/traditionally-aged student dichotomy I shall make use of in this dissertation. Its employment is for purely heuristic purposes, and should not be taken to indicate the existence of some fundamental, essential difference between the two groups. Adult students are better considered as being one subset of a larger group of marginalized college students, not as a group set apart. Beyond the fact that age 25 is somewhat arbitrary as a cut-off, a clean distinction between ‘traditionally-aged’ and adult students does not even hold within individual biographies. After all, most adult students were formerly traditionally-aged students, and many present-day traditionally-aged students will be the adult students of tomorrow. These are overlapping populations separated somewhat arbitrarily by time. Still, I find the category to be more tractable than that of “non-traditional” students.

In the next section of this chapter, I will provide a statistical portrait of the adult undergraduate population. I will describe their demographic and socioeconomic backgrounds, their familial and work responsibilities, and where they are attending school. I will then describe trends in adult enrollment since 1960, and provide estimates of the overall contribution that adult schooling makes to the educational attainment of the population. Finally, I will determine whether adult schooling closes disparities in educational attainment by race and gender which emerge earlier in the life course.

Following this, I will sketch the structural conditions which help explain why large numbers of adults are enrolled in college. I identify four key factors: the decreasing academic preparation of the marginal college student, a flexible and accessible higher education system, changes in higher education which have made it more difficult for disadvantaged students to complete degrees in a timely manner, and a degradation of the labor market position of less-educated adults. Exploring the latter two factors will require an in-depth look at changes in American higher education, as well as a description of structural changes in the American economy which bear upon increasing enrollment in higher education.
Adult Undergraduates: A Statistical Portrait

Who are Adult Students?\(^3\)

If ever they were anomalous in American higher education, adult students certainly are no longer. Fully 39.5% of today’s undergraduates, and 37.4% of those in AA or BA programs, were at least 25 years of age in 2012. This amounts to over 7.2 million individuals – a population larger than that of all but twelve U.S. states. Contrary to the stereotype that most adults in college are either “lifelong learners” taking classes for entertainment or workers pursuing upgrading in a specific skill, the overwhelming majority – over 88% - are enrolled in bachelor’s or associate degree programs\(^4\). Adults also contribute substantially to degree attainment. In the 2007-8 academic year, 35.2% of bachelor’s degree earners were at least 24 years of age, and 15.4% were 30 or older (Cataldi et al. 2014).

Figure 1.1 displays the distribution of adult students and traditionally-aged students across institutional types. Panel A shows the distribution across institutional categories. Whereas two in every five traditionally-aged students attends a public four-year college, this is true of just under a quarter of adults. Adults are roughly half as likely (15.5% vs. 8.3%) to be attending a non-profit four-year. Just under half (47.3%) of adults are enrolled in community colleges, as compared with just over a third

---

\(^3\) In what follows, unless otherwise specified, I will be drawing on my analysis of the most recent (2011-12) iteration of the National Postsecondary Student Aid Survey (NCES 2013b), otherwise known as NPSAS:12. The NPSAS is a large representative cross-sectional survey of students enrolled in American postsecondary institutions and is carried out by the U.S. Department of Education. The NPSAS has been conducted about every four years since the 1987-88 academic year. The sample is quite large – about 111,100 students were surveyed in the 2011-12 academic year, and pains were taken to include students in all types of institutions, from less-than-two-year training schools to PhD programs and medical schools. Of these, about 77,000 were undergraduates in degree programs, and this will constitute my sample for descriptive statistics. A rolling sample was conducted so as to include both fall and spring enrollees. In all analyses, I employed bootstrap replicate weights provided by NCES. Further information about this survey is available in Wine, et al. (2013).

\(^4\) The data that I am drawing from, the NPSAS 2012, does not inquire into respondents’ ultimate degree goals, only their current degree program. Bachelor’s-intending students at two-year schools are classed in the NPSAS as being in an associate degree program. But prior research indicates that among first-time community college students, 78% of 24-29 year olds and 61% of those over 30 are seeking a bachelor’s degree (Horn & Skomvold 2011). That the bachelor’s is the ultimate goal of most adult undergraduates seems little in doubt.
(36.8%) or traditional students. But where older students are truly disproportionately enrolled is in the proprietary sector. In 2012, about one in every five adult students was attending a for-profit, compared with one in twenty traditionally-aged students. Indeed, fully 72% of degree-seeking students in for-profit four-year colleges was 25 years of age or older.

Panel B shows that even in the traditional four-year sector, adult students are enrolled in less-competitive institutions. The “top schools” – which I defined as the 75 universities and 35 liberal arts colleges ranked highest by U.S. News & World Report in 2012 – enrolled fewer than 4% of adult students, but 14.5% of traditionally-aged students. Meanwhile, two in every five adults enrolled in the four-year sector are in minimally-selective or open-admission colleges, compared to one in five traditionally-aged students. Putting the information in the two panels together reveals that eighty percent of adult students are enrolled at colleges with few if any enrollment criteria beyond a high school degree, as compared with just over half of traditionally-aged students. These figures indicate

---

5 I use institutional selectivity categories provided by the NCES and based on admission rates and SAT distributions.
both the dramatic size of the non-selective sector in U.S. higher education, and the efficiency with which non-traditional and elite students are segregated (see also Apling 1991; Choy 2003).

There are various factors which may explain why adult students are mostly enrolled in less-selective schools. Firstly, they are convenient. Adult students are typically not very geographically mobile – they have jobs, places of residence, spouses and families – and therefore tend to pick colleges which are within easy commuting distance from homes and places of work. Secondly, adult students choose these schools because they are guaranteed entry. When adults decide to re-enroll in school, it is often with a sense of urgency deriving either from an encroaching internalized deadline (see Chapter 4), or from the understanding that the circumstances enabling enrollment – a supportive employer, childcare arrangements, children being the right age – are fortuitous and may not persist for long. Thus, adults are less influenced by a school’s prestige as long as it has the program they want and is conveniently located.

However, some adults likely choose non-selective schools because they suspect that more selective institutions would reject them. Some did not complete high school. Many never took the ACT or SAT because while in high school they didn’t expect to go to college. Others had less-than-stellar academic records in high school. Still others performed poorly during their initial stint in higher education, which may have been at a more selective college. But even those whose academic credentials are perfectly acceptable may believe that their having previously delayed or interrupted schooling would disqualify them from consideration at a more selective school.

Table 1.1 displays socioeconomic and demographic characteristics of adult students. A number of findings are of note. First, the female advantage in higher educational enrollment is exaggerated among adult students. This is interesting given that females are more likely to earn bachelor’s degrees before age 25 than males. Thus, more females enroll despite the pool of potential female adult students
being smaller. Secondly, there is a large overrepresentation of African-Americans among the adult student population. Latinos and Asians are, by contrast, underrepresented. Interestingly, this is not because immigrants are underrepresented among adults; it is the children of immigrants (the second generation) who are less likely to be enrolled as adults (11.0% vs. 18.5%).

Table 1.1. Demographic and socioeconomic characteristics of degree-seeking adult and traditionally-aged students (N=77,000)

<table>
<thead>
<tr>
<th></th>
<th>Traditionally-Aged Students</th>
<th>Adult Students</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>53.79%</td>
<td>60.06%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>White</td>
<td>56.04%</td>
<td>59.25%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Black</td>
<td>12.73%</td>
<td>21.24%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Latino</td>
<td>16.69%</td>
<td>14.38%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Asian</td>
<td>7.29%</td>
<td>4.52%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Other</td>
<td>7.24%</td>
<td>0.61%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Born outside U.S.</td>
<td>10.98%</td>
<td>13.43%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>English not first language</td>
<td>18.46%</td>
<td>16.35%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Second-generation</td>
<td>18.29%</td>
<td>11.52%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Veteran</td>
<td>0.91%</td>
<td>8.49%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Household Income (median)</td>
<td>$64,031</td>
<td>$31,068</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>First generation college-goer</td>
<td>32.75%</td>
<td>51.27%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Parent has BA</td>
<td>44.74%</td>
<td>26.68%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Both parents have BA</td>
<td>20.39%</td>
<td>9.64%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Income at or below poverty line</td>
<td>24.50%</td>
<td>35.35%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Income at or below 200% of poverty line</td>
<td>43.86%</td>
<td>60.70%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Any federal benefits</td>
<td>14.61%</td>
<td>24.12%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Food stamps</td>
<td>8.09%</td>
<td>18.09%</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

The figures in Table 1.1 reveal that adult students are, on average, living in poorer households than traditionally-aged students. But this does not necessarily mean that they are from poorer backgrounds per se. After all, adult students are more likely to be independent and thus the heads of their own households. They are mostly (as we will see below) in their 20s and 30s, and are, of course, students – many of whom work only part-time. These factors alone would lead them to have lower household incomes than traditionally-aged students, whose household income is mostly determined by the income of their parents. However, an indication of differences in socioeconomic background is
given by parental education differences. Fully half of adult students are from families without a parent who ever attended college, compared with a third of traditionally-aged students. This suggests that the other measures of economic resources presented here speak to the relatively disadvantaged backgrounds, and not merely the present circumstances, of adult undergrads.

Table 1.2. Age distribution and age at first enrollment of degree seeking adult students (N=23,670)

<table>
<thead>
<tr>
<th>Age Category</th>
<th>% of Adult Student Population</th>
<th>% First enrolled in traditional ages</th>
<th>Median age at first enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29</td>
<td>36.59</td>
<td>78.15</td>
<td>20</td>
</tr>
<tr>
<td>30-34</td>
<td>22.44</td>
<td>62.53</td>
<td>20</td>
</tr>
<tr>
<td>35-39</td>
<td>13.56</td>
<td>54.08</td>
<td>23</td>
</tr>
<tr>
<td>40-49</td>
<td>18.13</td>
<td>48.9</td>
<td>25</td>
</tr>
<tr>
<td>50+</td>
<td>9.29</td>
<td>33.97</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

I have defined adult undergraduates as anyone aged 25 or older who is enrolled in a post-secondary institution and seeking either an associate or bachelor’s degree. But what is the age distribution of this population? Table 1.2 shows that most adult students are on the younger side, but that the age distribution is more spread out than one might imagine. While nearly 60% of adult students are under 35, adults who are over 40 make up 20% of the adult student population. The bulk of adult students initially enrolled prior to 25, but this is truer among the younger than the older students. Indeed, the median age at first enrollment for adult students 40-49 is 25, and for those 50 and older it is 30.

Prior research has shown that adult students experience considerable stress from conflicts between multiple roles, and in particular between school and jobs (Gigliotti & Huff 1995) and between school and family (Deutsch & Schmertz 2011; Giancola, Grawitch & Borchert 2009; Home 1998). The

---

6 This speaks to the inappropriateness of most higher education datasets to studying the adult student population. The Beginning Postsecondary Longitudinal Survey, for instance, samples only first-time freshmen. But most adult students are not first-time enrollers, and first-time adult students are not representative of adults as a whole.
external obligations of adult students are considered in Table 1.3. More than half of adult enrollees are responsible for the care of a child, and a quarter are solely responsible. Working is, of course, common among all college students, but among adults this is more likely to be full-time work. “Worker identity” refers to whether one identifies more as a worker or as a student\(^7\). More than half of employed adult students principally consider themselves to be workers (37/68=54), compared with only one in six traditionally-aged students who work (11/59=18%). What is truly striking is how multiple obligations compound among adult students. About 30% of adult students both have children and work full-time, and 14% are single parents who work full-time.

Table 1.3. Competing responsibilities among degree-seeking adult and traditionally-aged students (N=77,000)

<table>
<thead>
<tr>
<th></th>
<th>Traditionally-Aged Students</th>
<th>Adult Students</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>3.9%</td>
<td>38.41%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Dependent child</td>
<td>6.47%</td>
<td>54.57%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Single Parent</td>
<td>5.98%</td>
<td>27.84%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Working</td>
<td>59.23%</td>
<td>68.16%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Working full-time (30+ hours)</td>
<td>25.10%</td>
<td>49.96%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Worker Identity</td>
<td>10.65%</td>
<td>37.41%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Full-time and dependents</td>
<td>3.12%</td>
<td>29.08%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Full-time worker and single parent</td>
<td>2.43%</td>
<td>14.11%</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

External commitments vary substantially by gender, however, and to a lesser extent by race/ethnicity (see also Goldrick-Rab & Sorensen 2010). Table 1.4 reveals that female adult students are much more likely to have children, and to be single parents, than male adult students (Table 1.4).

Among whites, 60% of females have children and 29% are single parents; comparable figures for males are 41% and 11%. 70% of black female adult students have children, and 56% are single parents.

Among black males, only 46% are parents and 24% are single parents. Gender disparities are stark across ethnic groups, with the exception of single parenthood among Asians.

\(^7\) The survey question asks of employed respondents whether they consider themselves more to be a “worker who studies” or a “student who works”. 11
Unfortunately, the NPSAS doesn’t ask respondents older than 30 any questions about their high school experiences, so I cannot compare adult students as a group with traditional students. In Table 1.5, I present summary measures of educational attainment for adult students 30 and under. By these indicators, adult students are, on average, substantially less academically prepared than traditionally-aged students. Adult students both earned lower grades and were exposed to a less rigorous curriculum while in high school. This is not a hugely surprising result given that curricular intensity and high school grades are established predictors of timely college completion (Adelman 1999). However, what is perhaps more surprising is how many adult students are quite well-prepared. A quarter had high school GPAs of 3.5 or higher; 14% took four years of foreign language in high school; 14.5% took calculus; and nearly 40% earned college credits while in high school. And while fewer adults took the SAT or ACT, those who did scored only slightly lower on average than traditionally-aged students. These results indicate the oft-overlooked fact that among adult students there is a substantial range of academic preparation and ability.

Finally, in table 1.6, I present statistics relating to college experiences and financial aid. As might be expected given the prevalence of competing demands for time, adult students are far more likely to be enrolled part-time than traditionally-aged students. However, it is important to note that a clear

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Table 1.4. Parenthood responsibilities by gender and race/ethnicity among adult students (23,670)

<table>
<thead>
<tr>
<th></th>
<th>Parenthood</th>
<th>Single Parenthood</th>
</tr>
</thead>
<tbody>
<tr>
<td>White males</td>
<td>41.07%</td>
<td>11.17%</td>
</tr>
<tr>
<td>White females</td>
<td>60.34%</td>
<td>28.81%</td>
</tr>
<tr>
<td>Black males</td>
<td>45.94%</td>
<td>23.99%</td>
</tr>
<tr>
<td>Black females</td>
<td>70.46%</td>
<td>56.47%</td>
</tr>
<tr>
<td>Latin males</td>
<td>44.34%</td>
<td>20.45%</td>
</tr>
<tr>
<td>Latin females</td>
<td>63.58%</td>
<td>37.89%</td>
</tr>
<tr>
<td>Asian males</td>
<td>35.90%</td>
<td>14.49%</td>
</tr>
<tr>
<td>Asian females</td>
<td>51.99%</td>
<td>16.74%</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

Whether one took the SAT is measured for all students, and SAT scores are averages for all who took the SAT.
majority of adults are full-time students. What is very rare among adults, however, is on-campus residence. Indeed, only 2% of adults at four-year schools live on campus, as compared with 35% of traditionally-aged students\(^9\). Adult students are about 9 percentage points more likely to have to taken a remedial class than are traditionally-aged students, likely a consequence of both a lower overall level of academic preparation obtaining among adult students, and the fact that adults are disproportionately likely to attend community colleges\(^{10}\).

### Table 1.5. Academic preparation of degree-seeking adult and traditionally-aged students. (N=62,250)

<table>
<thead>
<tr>
<th></th>
<th>Traditionally-Aged Students</th>
<th>Adult Students</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS GPA &lt; 2.5</td>
<td>10.34%</td>
<td>17.72%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>HS GPA &gt; 3.4</td>
<td>41.53%</td>
<td>27.85%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Earned College Credits in HS</td>
<td>60.53%</td>
<td>38.91%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>GED, certificate or no degree</td>
<td>3.90%</td>
<td>12.79%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Took any honors courses in HS</td>
<td>50.58%</td>
<td>35.41%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Highest math: &lt; Alg. 2</td>
<td>11.41%</td>
<td>27.91%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Highest math: Calculus</td>
<td>27.98%</td>
<td>13.51%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>4 years foreign language</td>
<td>22.25%</td>
<td>14.51%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Did not take SAT/ACT</td>
<td>10.79%</td>
<td>29.33%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SAT math (takers)</td>
<td>504.27</td>
<td>487.29</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SAT verbal (takers)</td>
<td>500.49</td>
<td>490.13</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

On average, the tuition paid per year by adult students is about half that paid by traditionally-aged students. According to the NPSAS, adult students apply for aid at roughly the same rate as younger students, and since they are more likely to be in poor households they are slightly more likely to receive a Pell grant. Financing disparities are apparent in merit aid and institutional aid, both of which younger students are more likely to be awarded. Many state merit aid programs are targeted specifically for students going to college immediately after high school (though exceptions tend to be made for

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\(^9\) This understates the true disparity in residence. Traditionally-aged students who move to apartments near campus in their junior and senior years are classed as “off-campus” when this is true only nominally. Among first-year students at four-year schools, 49% of traditionally-aged students and 2% of adults lived on campus.

\(^{10}\) There is some evidence that students who attend community college are substantially more likely to be assigned to remediation than similarly prepared students who begin at four-year schools (Monaghan & Attewell 2015).
veterans). And institutional aid is more likely to be given to students who attend wealthier private institutions, which adult students definitively do not. Nonetheless, adult students are able to get an equal percentage of their expenses covered by aid (contrary to findings in Apling 1991), and receive more of their aid in the form of grants than younger students.

Table 1.6. College experiences, tuition and aid for degree-seeking adult and traditionally-aged college students (N=77,000)

<table>
<thead>
<tr>
<th></th>
<th>Traditionally-Aged Students</th>
<th>Adult Students</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-time enrollment (in survey year)</td>
<td>18.05%</td>
<td>40.38%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Lived on-campus (4-year students)</td>
<td>35.32%</td>
<td>2.12%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Ever took remedial</td>
<td>27.76%</td>
<td>36.22%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Tuition</td>
<td>$8,895.14</td>
<td>$4,372.44</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Applied for aid</td>
<td>82.15%</td>
<td>80.91%</td>
<td>.027</td>
</tr>
<tr>
<td>Pell Grant in survey year</td>
<td>38.39%</td>
<td>46.96%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Took out Stafford (ever)</td>
<td>49.86%</td>
<td>57.98%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Private Loan (svy year)</td>
<td>6.78%</td>
<td>5.06%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Any loan (ever)</td>
<td>52.75%</td>
<td>62.12%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Merit aid (sy)</td>
<td>17.20%</td>
<td>2.93%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Institutional Aid</td>
<td>28.35%</td>
<td>11.50%</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>% of Expenses covered by aid</td>
<td>39.93%</td>
<td>39.41%</td>
<td>.268</td>
</tr>
<tr>
<td>Loan as % of Aid</td>
<td>58.47%</td>
<td>48.61%</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Source: NPSAS 2012

The emerging portrait so far suggests that many adult students face substantially greater challenges in their quest for a degree than the average college student: they live in poorer households, are from more disadvantaged backgrounds, have less extensive academic preparation and far more extensive competing demands upon their time. Many adults fall squarely within a larger pool of undergraduates who exhibit multiple “risk factors” for non-completion and are thus more in need of assistance than the average student (Choy 2002). However, by and large such students attend institutions which are low on the selectivity scale – community colleges, four-year commuter schools, and for-profit colleges. These institutions are, in the greater universe of higher education, relatively
poor, with low per-student spending. It is a rather perverse truth about American higher education, then, that the neediest students are concentrated at precisely the institutions least capable of effectively assisting them, while wealthy, well-prepared students attend schools which are flush with resources.

*Trends in Adult Enrollment*

There is strong evidence that suggests that rates of adult undergraduate enrollment are substantially higher today than in the past. The enrollment rate of those of “traditional” college age (ages 19-23) has increased substantially, and by all accounts the proportion of undergraduates who are adults has increased as well.

Direct estimates of enrollment rates are, however, surprisingly difficult to obtain, because data sources like the U.S. Census only gradually began paying attention to the phenomenon of college-going among adults. In figure 1.2 I present evidence on trends available through the Decennial Census and the American Community Survey. These surveys inquire only whether one is enrolled in education at all, but do not distinguish among different forms of education. Thus, the enrollment rates which can be calculated using this data mix together enrollment in undergraduate college, graduate school, GED programs, and other schooling. In addition, respondents over the age of 34 were not asked about school enrollment until 1970. Enrollment rates are depicted separately for four age-groups.

The figure indicates a clear upward trend in school enrollment. Since 1960, the enrollment of 25-29 year olds rose from just over 5% to around 17%. Even in the oldest age group I display here, enrollment is more than double what it was in 1970. Enrollment rates for age groups also appear to
have increased in recent years more for younger than for older age groups, with enrollment among 25-29 year olds rising particularly sharply over the past decade.\(^{11}\)

Figure 1.2.

For more detail, I turn to the October Educational Supplements to the Current Population Survey (CPS). Though this survey asks more detailed questions — in particular, it asks both educational attainment and type of educational enrollment (college/non-college). We can thus distinguish undergraduate from graduate education, and determine more properly the rate of undergraduate enrollment among the population properly exposed to the risk of enrollment. This rate, calculated for

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\(^{11}\) Here I should inject a note of caution regarding the apparent decline in enrollment between 1990 and 2000. These are point estimates from Decennial Censuses, taken ten years apart. Adult college enrollment is sensitive to the business cycle, with more adults enrolling during economic downturns and fewer during booms. The Decennial Census of 1990 was conducted during a recession (the recession of 1990-91), and the 2000 Census was conducted at the tail end of the 1990s boom, a time of extremely low unemployment.
the period from 1995-2010\textsuperscript{12} and separately for different age-groups, shows a less obvious upward trajectory than the Decennial Census data (Fig. 1.3). Instead, enrollment rates seem to have been flat through the late 1990s, to have nudged upwards slightly since the recession of 2001-2, and then to have risen sharply in the wake of the 2007-8 financial crisis.

Figure 1.3.

![Figure 1.3](image)

Figure 1.4 disaggregates the enrollment rates of the two youngest age groups by gender. Doing so reveals very different trends for males and females over this time period. The male enrollment rate for both age groups is lower than the female rate, and is more or less flat until the onset of the financial crisis. For women, there is a far more consistent response enrollment rates to changes in economic growth: a slight drop in the rate during the boom of the late 1990s, a jump in response to the recession of 2001-2, a leveling out over the mid-2000s recovery, and then a sharp uptick after the Great Recession.

\textsuperscript{12} The CPS October Supplement does not appear to have asked the college enrollment question of individuals over 24 until 1995; at the very least it is not present in earlier CPS October Supplement data available through IPUMS.org.
set in. Also apparent for women is an overall upward trend: enrollment among 25-29 year olds rose from about 10% to about 14% over the period.

Figure 1.4

This evidence, though not conclusive, suggests that adult enrollment in undergraduate education has been growing secularly for the past five decades, that within this overall trend the rate of enrollment tends to rise and fall inversely with the performance of the economy, and that patterns differ by both age-group and gender.

Contribution to Overall Attainment and Effects on Pre-existing Disparities

Adults do not attend college at nearly as high rates as younger students, and they are much more likely to attend part-time. However, since the adult population is large, the overall contribution to the stock of completed degrees is substantial. And since adults have many years to complete their education, the cumulative impact of adult schooling on the educational attainment of a cohort is potentially quiet large even though few cohort members earn a degree in any given year. Attewell and Lavin (2007), for instance, found that the educational attainment of disadvantaged students continues
to rise considerably over one’s 30s and 40s. It is also possible that adult educational participation could lessen disparities in educational attainment which arise earlier in life if the participation and attainment of lower-attainment groups is relatively high. On the other hand, adult schooling could serve to broaden such disparities if higher-achieving groups are more likely to return to school or more likely to complete given enrollment. In this section, I build upon and extend work by Jacobs and Stoner-Eby (1998), who found that, for the cohort that was 20-24 in 1970, at least 30% of all bachelor’s degrees earned were earned after age 30. They also found that the disparity in high school completion between black and white men decreased over the course of adulthood, but the disparity in college completion widened.

I first draw on 1995-2010 CPS October Supplements to investigate the bachelor’s degree attainment of the 1971-1984 birth cohorts, all of whom were between 22 and 39 years old over this period\textsuperscript{13}. Results appear in Figure 2.7. It is important to note that for no cohort do all ages appear in this graph. The 1971 cohort was 24 in 1995 and 39 in 2010, so observations at ages 22 and 23 are not observable in these data. The 1984 cohort enters the analysis at age 22 in 2005, and only ages to 27 by 2010.

The graph, while presenting a lot of information, is able to impart well the general pattern of educational upgrading which takes place in early adulthood. For all cohorts, there is a rapid increase between ages 22-25, with a slowing rate of continual increases over time building towards but never attaining non-increase. Older cohorts begin at a lower baseline and take longer to reach any given level of attainment. No cohort’s attainment substantially exceeds 35%, though there is no reason to suspect

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\textsuperscript{13} In order to study cohort educational upgrading, I use a “synthetic cohort” method, allowing observations of distinct cohort members at various ages to stand in for change over time. For instance, for the 1970 birth cohort, 1995 data would provide an observation at age 25, 1996 data with an observation at age 26, and so on. Because these are repeated cross-sections, different individuals are sampled at each observation, but they are all drawn from (the surviving members of) essentially the same population. The method as the drawback of providing estimates which bounce around due to sampling error. Jacobs and Stoner-Eby (1998) employed this method with decennial census data.
that over time this will not change—younger cohorts reach 35% at younger ages, and may continue to build upon this level as they move through their 30s and 40s.

Figure 1.5. Cumulative bachelor’s attainment between ages 22-39 for 1971-1984 birth cohorts. A focus on the overall attainment pattern reveals continued educational upgrading after age 25.

How much do cohorts increase their attainment after age 24? For the 1971-77 cohorts, for which I have estimates at both ages 25 and 35, the increase is from 23.1% to 33.8%—a 46% increase. As an estimate of cohort attainment in non-traditional years, this probably too low, since I am ending the age-window in this case at only 35, and there is every indication that cohorts continue to upgrade after this point. In fact, for the 1971 cohort, the increase between 25 and 39 is from 23.5% to 35.4%, an increase of 50.1%. For this cohort, a third all individuals who earned a bachelor’s degree (by 39) did so after turning 25—which is in keeping with previously cited estimates.
I also leverage data from the National Longitudinal Survey of Youth, both 1979 and 1997 cohorts, to answer this question. The NSLY 79 covers the birth cohorts of 1958-1964, whereas the NLSY 97 samples members of the 1980-84 cohorts. Thus, the older group is older than the cohorts depicted in my CPS analysis, and the younger group is the same age as the youngest five cohorts show above. Analysis of these data result in a more modest estimate of the effects of adult educational attainment (Fig. 1.6). For the older cohort, bachelor’s attainment rises from 19.6% at 25 to 25.4% at age 45 – an increase of just over 20%. This could indicate that the CPS estimate was overly enthusiastic, or that there was a different pattern of educational participation and attainment this cohort. For the younger cohort, the rate of bachelor’s attainment rose from 25.5% at age 25 to 30.5% by age 31 – an increase of 17.0% in six years. This increase is also slightly lower than CPS results, in which attainment among the 1980 cohort rose from 27.2% at 25 to 33.7% by 30.

Next, I turn to the question of whether disparities in educational attainment decline or widen over the life course. I use the CPS data to answer this question, and look at gender and racial disparities in college completion at ages 25 and at 35. To gain a smoother estimate of attainment at each age, I
combine attainment estimates for the cohorts of 1971-1975, and present results in Table 1.7. At 25, females had a 4.3 percentage point advantage in bachelor’s completion. Over the next ten years, males increased their attainment by 32.6%, or 7.6 percentage points. But over the same period, females increased their attainment by 32.9% - 9.1 percentage points. Thus, the gender gap in educational attainment widened for these birth cohorts over the late 20s and early 30s. This is consistent with earlier findings of higher participation rates over age 25 among women.

Table 1.7. Average bachelor’s attainment rates at 25 and 35 for the 1971-75 birth cohorts, by gender and race.

<table>
<thead>
<tr>
<th></th>
<th>Attainment at 25</th>
<th>Attainment at 35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females (1971-75)</td>
<td>27.6</td>
<td>36.7</td>
</tr>
<tr>
<td>Males (1971-75)</td>
<td>23.3</td>
<td>30.9</td>
</tr>
<tr>
<td>Whites (1971-75)</td>
<td>31.0</td>
<td>39.4</td>
</tr>
<tr>
<td>Blacks (1971-75)</td>
<td>13.4</td>
<td>22.5</td>
</tr>
</tbody>
</table>


The gap at age 25 between blacks and whites was 17.6 percentage points. By age 35, blacks increased their bachelor’s attainment rate by a striking 67.9%, or 9.1 percentage points. The growth in bachelor’s attainment among whites was smaller in relative terms (27.1%) but similar in absolute terms (8.4 percentage points). Thus, the tremendous gain in attainment among blacks did reduce the gap in bachelor’s completion, but only very slightly. Thus, by and large, the racial gap in bachelor’s attainment was maintained, though not expanded, through adult college attendance.

**Historical and Institutional Context for Adult Enrollment**

The large-scale presence of older students on college campuses should be understood in the light of four key factors. First, the American higher educational system is, compared to the systems of many developed countries, very open and accessible. The community college sector in particular is responsible for this accessibility, since community colleges are relatively cheap, have minimal requirements for matriculation, and are geographically dispersed. The comprehensive four-year
colleges and branch campuses contribute to this, as has, recently, the for-profit sector. As a result, the system provided for multiple “second-chances” at higher education – re-enrollment for those who earlier left, and first-time enrollment later in life for others.

Second, there has been a secular trend of expanding higher educational participation over the past century, and particularly since 1945. Participation in higher education has always been more common among those with more developed academic skills, but as higher education has incorporated larger portions of succeeding cohorts, students with less-developed skills have become more likely to enroll. As a result, over time the marginal college student has become less academically prepared for college. Less-prepared students are more likely to stop out, to take longer to complete, and to complete through multiple enrollments.

Third, though higher education is accessible, and though it is being accessed increasingly, it appears that college has become increasingly difficult for disadvantaged students to actually complete independent of their academic skills. The reasons for this are complex, but can be traced back to two elements. First, the expansion of higher education occurred through expanding enrollments at the types of institutions which tend to have lower completion rates. Second, higher education has increasingly segregated more disadvantaged and less-prepared students in these sorts of institutions. And third, the system of higher educational financing changed in such a way that the burden of paying for college has shifted onto individual students and their families. The result is a lower completion rate overall, greater disparity in completion by social class, and a greater need for students to complete through prolonged and multiple enrollment spells.

Finally, changes in the broader economy have led the wages and working conditions of less-educated workers to deteriorate. Thus, workers without a bachelor’s degree have more incentive to return to college, and fewer alternatives to doing so if they wish to achieve material security.
Two of the factors I have mentioned - the declining preparation of the marginal student and structural factors which make getting to the degree more difficult – are important because they explain the large stock of individuals who reach age 25 with incomplete degrees. These individuals are potential returning adult students. The other two – relative ease of access and a rising incentive to return – help explain why these individuals and others can and do enroll in large numbers. Below, I explore these factors in more detail.

An Open and Accessible System

The bulk of American college students are, today, enrolled in colleges with few if any formal barriers to entry. As Figure 2.5 shows, over half of all college students are enrolled at institutions which accept 100% of their applicants. This situation has been arrived at by design, a response to calls from elites and political pressure from below to expand higher access to the masses. The community college sector in particular was specifically created in order to provide access to higher education to just about anyone who desired to go, and particularly to those whose grades and socioeconomic backgrounds traditionally would have made them unlikely college material (Brint & Karabel 1989; Cohen & Brawer 2003). Though the creation of community colleges often took place at the instigation of local educational boosters (Dougherty 1994), they ended up being dispersed enough so that in most states the bulk of the population lives within driving distance of campus.

This degree of openness and accessibility is not universally encountered even in wealthier countries. OECD estimates put U.S. higher educational attendance rates at just over 75%, behind only six other member states\(^\text{14}\) and substantially higher than nations such as France, the United Kingdom, Japan and Germany (OECD, 2013). Moreover, the U.S. was a leader in educational expansion, reaching high rates of postsecondary participation far earlier than most other wealthy countries (Goldin & Katz

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\(^{14}\) Those countries are Australia, Iceland, Poland, New Zealand, Norway, and Slovenia. The rates reflect estimates of eventual life-time attendance for recent cohorts of young people.
2009). Part of the reason for high rates of participation could be the decentralization of the U.S. higher education system. Colleges have been founded not by the federal government but by the states, which to some degree compete with each other to raise their human capital stock, and also by local boosters, religious groups, and other private organizations. In their cross-national study of higher educational systems, Shavit, Arum and Gamoran (2007) find that such “diversified” systems – in which postsecondary planning and control is decentralized – tend to have higher rates of participation than systems in which all colleges and universities are organized within one or two centralized agencies.

Figure 1.7.

Scheutze and Slowey (2002) assert that the U.S. system of organization, because it is decentralized and relatively unregulated, is particularly well-suited to the participation of adult students. Adult student participation is facilitated, they argue, by such factors as open-access enrollment, a high degree of horizontal and vertical differentiation among colleges, the scheduling of night and weekend courses, allowance for part-time enrollment, distance education, the ability to transfer credits, and affordability. The high degree of institutional autonomy and competition leads to the adoption of such practices by a large subset of institutions.
Expanding Enrollment and the Preparation of the Marginal Student

At the middle of the 20th century, higher education was still a fairly elite experience. Only 6.2% of the population had a bachelor’s degree, and only 14.3% of 18-24 year olds were enrolled in education (NCES 1993; U.S. Census, 2012). Conditions were ripe, however, for a major expansion. By this point, higher educational participation had been expanding, steadily, for the past 50 years. By 1950, three out of every five youths earned a high school diploma (Goldin & Katz 2008). And the politics of the period, influenced by the popular sacrifice of World War II and the social-democratic interventionism of the 1930s, favored the efforts to equalize economic opportunity. This was reflected in *Higher Education for American Democracy*, the 1946 report by the presidential commission’s report on higher education, which enunciated the vision that a college education ought no longer be reserved for the well-to-do. By 1950 the economy was beginning its long postwar boom, and was in need of more highly-trained individuals. This was the dawn of the era of mass higher education.

Between 1945 and 1990, the college enrollment grew from just over two million to over fourteen million – a rate of growth of over 600% while the underlying population grew by only 75% (NCES 1993). By 2011, 68% of recent high school graduates enrolled directly in college, up from 51% in 1950 (Aud et al. 2013). College aspirations are even higher. Goyette (2008) has shown that between 1980 and 2002, the percentage of high school 10th graders who expected to attend college nearly doubled, increasing from 43.4 to 84.5%. The plan to go to college is clearly no longer restricted to the children of the affluent, or even to students who performed particularly well in high school. Sociologist James Rosenbaum (2001) has referred to this as the development of the “college for all” norm in American society as a whole. This norm, he asserts, is injurious, for it has led students to de-link collegiate aspirations from performance, learning, or even effort in high school. As a result, many students end up at college without having the requisite skills for success and contributing to high drop-out rates.
The academic preparation of entering college students has indeed fallen over time, but this is in part due to simple mathematical necessity. Given even a constant distribution of academic preparation and skill\textsuperscript{15}, a rising enrollment trend (combined with a historical and current academic gradient in participation) results, over time, in students who are less academically prepared becoming more likely to go to college. This trend was already evident in the 1970s, when scholars like Patricia Cross (Cross 1974) could investigate the difficulties of educating “the new college students”, by which she meant not low-SES students, but students who performed poorly in high school and thus in previous generations would not have enrolled in college. That many students today – particularly at open-enrollment institutions – lack basic academic skills has been well-recognized by scholars and policymakers, and has led to an expansion of remedial programs. Scholars have found that declining educational level of preparation of the marginal college student explains some of the decline in completion rates and the increase in time-to-degree that has taken place over recent decades (Bound, Lovenheim & Turner 2010, 2012). Since less-prepared students take longer on average to complete a degree, and are more likely to pursue a degree through multiple enrollment spells, then this lower level of preparation likely contributes to raising enrollment rates of adults older than age 25.

\textit{Easier to Enroll, but Harder to Complete}

The past 40 years have been marked not only by continued expansion in enrollment, but also by stagnating or slightly declining rates of overall college completion\textsuperscript{16}, at least by certain ages (Bound, Lovenheim & Turner 2010; Turner 2004). The socioeconomic disparity in degree completion has

\textsuperscript{15} Scholars disagree as to whether or not the underlying distribution of academic skills among adolescents has remained constant or declined over time. Turner (2004) found that the distribution of scores in the NAEP fell between 1971 and 1999, but this analysis conflicts with those of Bound, Lovenheim, and Turner (2010) and with the most recent trend analysis of the Department of Education (2012), which found average NAEP math and reading scores in 2011 to be virtually identical to those in the early 1970s.

\textsuperscript{16} The college completion rate, distinct from bachelor’s attainment rate, is defined as the proportion of those who ever enroll in college that earn a degree. Much of the research, such as that of Turner, looks at the college completion rate as of age 23 or age 25. If such age cut-offs are employed, the completion rate does appear to have declined slightly over time.
increased over this period as well (Bailey & Dynarski 2011; Bound, Lovenheim & Turner 2010). Taken together, this suggests that the decline in college completion is taking place mostly, if not entirely, among disadvantaged students. The reasons for this are complex, but they can be summarized under two headings: changes in where students enrolled, and changes in how higher education is paid for. I contend that these two sets of changes have made college completion more unlikely for college students hailing from the lower end of the socioeconomic spectrum.

Changes in where students enrolled. At the dawn of the era of mass higher education, it was clear to policymakers that a massive expansion was imminent, but what was less clear was how higher educational institutions would accommodate it. Far more seats would need to be available, but would these seats be at existing institutions, or would new institutions be created?

Educational expansion would mean a change in who went to college. In short, college would become less exclusive, both socially and academically. This was viewed by higher education leaders with ambivalence. James Bryant Conant, the president of Harvard University, recognized the potential of expanding enrollment for equalizing opportunity, but worried that it would also dilute the quality of education, particularly at flagship state institutions. In his monograph Education and Liberty (1953), Conant proposed that leading four-year colleges actually cut their enrollments somewhat, and that instead the two-year sector be relied upon to meet the demand of the masses for access to higher education. This amounted to an endorsement of a two-tier system of higher education which would respond to popular outcry for college access while insulating prestigious institutions and elite students from the rising tide of enrollments.

That Conant was far from alone among university leaders in his concerns about the effects of expanding enrollments has been well-documented (Brint & Karabel, 1989). And by and large, the expansion of higher education unfolded as if these views were given considerable weight. The number
of community colleges doubled between 1950 and 1975 (Cohen & Brawer 2003). In 1950, only about 200,000 students - less than 10% of all undergraduates – were enrolled at two-year schools. By 1980 they enrolled over 4.5 million students – nearly 40% of total enrollment (Fig. 1.9)\textsuperscript{17}. Altogether, 43% of the 1950-80 expansion was in the community college sector. Meanwhile, within the four-year sector, expansion largely took place through the creation or transformation\textsuperscript{18} of second-tier public universities, many of which mostly or entirely non-residential. The example of Michigan will serve to illustrate. At the end of World War II, Michigan had two major public research universities (the University of Michigan-Ann Arbor and Michigan State University), a technical college (Michigan College of Mining and Technology), and a five teaching colleges. Between 1946 and 1965, Michigan added six more public four-year colleges and upgraded all five of its teaching colleges to comprehensive colleges. By 1980, 64% of its four-year students were enrolled at either one of the newer campuses or upgraded teacher’s colleges\textsuperscript{19}. Meanwhile, while enrollment at Michigan State doubled, enrollment at Ann Arbor barely budged.

Enrollment increased much more slowly after 1980, edging up only 12% in the 1980s and 6.5% in the 1990s. In the past decade or so, this expansion picked up again, growing by 37% between 2000 and 2010 (NCES 2014, Table 303.70). This time, a large portion of the increase took place in the for-profit sector. Enrollment in for-profit colleges went from accounting for only 3% to nearly 10% of all undergraduates. This means that fully 27% of the 2000-2010 expansion occurred in the for-profit sector alone; another 26% occurred at the community colleges (NCES 2014, Table 303.25). For-profits serve an even more disadvantaged population than even the community colleges, and while they seem to be slightly better at getting students to complete degrees, their students have a harder time getting jobs,

\textsuperscript{17} The decline in the community college enrollment share after 2001 which is visible in Fig. 1.9 is entirely due to increased enrollment at for-profit colleges.

\textsuperscript{18} One of the major trends of this period was the conversion of teacher’s colleges (“normal schools”) to less-selective comprehensive colleges or universities.

\textsuperscript{19} This figure comes from my calculations using the Integrated Postsecondary Education Data System (IPEDS) (NCES 2015).
earn lower wages, and have far greater debt burdens compared with similar students at public colleges (Deming, Goldin & Katz 2012). Recent controversies resulting from predatory recruitment, high student debt burden, scant expenditure on instruction, “accreditation buying” have led to a regulatory crackdown in this sector, declining investment, and falling enrollment. The sector remains substantial, and is almost certain to grow substantially in the future, albeit more slowly than over the recent decade (Fain & Lederman 2015).

Figure 1.8.

If we think of American higher education as a pyramidal hierarchy of prestige and selectivity, the expansion of enrollment took place overwhelmingly at the bottom of the pyramid. This met the desire of Conant and other to permit expansion while buffering elite institutions from the new clientele, and exempting elite students from having to share classrooms with newer-type enrollees. In short, as access higher education broadened at a system-wide level, colleges simultaneously became more segregated at an institutional level. College expansion in the US appears to be an excellent example of what Lucas (2001) termed “effectively maintained inequality”, whereby democratization of a particular level of education is compensated for through hierarchical differentiation.
This trend was compounded by the manner in which the market for higher education became nationally integrated over this same period. Whereas students in 1950 mostly went to nearby colleges, by 2000 an increasing proportion of students both applied to and enrolled at schools beyond their state. As students increasingly applied far beyond their homes, competition for entrance at prestigious schools became increasingly fierce, and prestigious schools simultaneously competed for the highest-performing students (especially ones who could pay full fare). This meant that colleges specialized, increasingly catering to a certain slice of the potential student body.

In a series of papers, Hoxby (1997, 2009) has documented how, over the period between 1960 and 1990, colleges became increasingly stratified in terms of the sorts of students who matriculated. In the mid-60s, the difference in mean SAT scores between colleges at the 90th and 10th percentiles was 283 points, and by 1991 this had grown to 370 points. As variance in academic preparation between schools increased, variance within schools declined. In 1960, she reports, the average standard deviation in SAT scores at large public colleges was 122, and by 1991 this had declined to 85 (similar declines occurred regardless of college size and control). In effect, over this period colleges began to be attended by student bodies which were increasingly homogenous in terms of academic preparation.

This pattern is summarized in Fig. 1.10 (from Hoxby 2009). In this figure, colleges are separated out by percentile group of selectivity in 1962, the first year for which the author had reliable data; each separate percentile group is represented in a different line. The Y axis depicts the mean SAT or ACT score of colleges in that group, with test scores converted to percentiles. The chart shows, first, the increasing differentiation in mean SAT scores among institutions between 1962 than in 2007. Secondly, where a school was placed in terms of selectivity at the beginning of the period largely determined its place at the end of the period: older, initially prestigious schools became increasingly competitive and the least prestigious schools became less so. Finally, most colleges did not become increasingly selective over the time period. In fact, the opposite occurred: more than 50% of colleges became less selective,
meaning that they enrolled fewer high-performing students. And it is important to note that this chart, by not including institutions founded since 1962, likely understates the current degree of institutional segregation by academic preparation.

Figure 1.9

Simultaneously, while tuition and per-student spending both rose at all colleges, the gaps between elite and non-elite colleges grew dramatically. This means that though students at more elite colleges were paying substantially more than their peers at less selective colleges to attend school, they were in effect getting dramatically more out of school as well. As Winston (1999) has shown, students
at the most elite schools only pay, on average, 20% of the total amount spent on them, whereas at the least selective schools students pay nearly 80% of total per-student costs\textsuperscript{20}.

So, in sum, over the past 50 years, colleges became more hierarchically differentiated and internally homogenous in terms of student preparation; increasingly, high-achieving students went to school with other students like them, and students who had struggled more in high school went to school with other such students. There is also evidence that selective colleges became less socioeconomically differentiated over this same period, with wealthy students becoming increasingly concentrated at highly-selective colleges (Astin & Oseguera 2004; Bastedo & Jaquette 2011). Since per-student spending is tightly correlated with institutional selectivity, this means that increasingly, wealthy and highly academically prepared students were at schools which were increasingly flush with resources, while poorer students, and those in greater need of academic assistance, attended schools where resources were stretched thin. But does this have an impact on degree attainment?

\textit{Unequal Institutions, Unequal Students, Unequal Outcomes.} Whether the hierarchical segregation of higher education has had any negative impacts has never been directly tested to my knowledge. But the question can be broken down into a number of sub-questions. What is the evidence for 1) peer effects in higher education, 2) selective school effects, 3) community college effects, and 4) residential college effects? Each of these is addressed by a substantial literature, and I will aim mainly to summarize the main findings as they bear on this question.

First, since higher education has become more segregated by academic ability, there is reason to be concerned about peer effects. Peers establish, collectively, norms of behavior both in the classroom and outside of it which can impact, among other things, class participation, homework time,

\textsuperscript{20}The reason for this, for Hoxby (1997) and Winston (1999), is that college students are not simply consumers of educational services; they are also a part of the educational process (“inputs”) for the students with whom they attend college. Students thus both pay a price for attending (tuition) and receive a “wage” for their services (student subsidy, defined as expenditure per student minus tuition).
and frequency of class attendance. In classes, disruptive students can directly impinge upon peers’ ability to learn, and an anti-intellectual peer environment can discourage peers from engaging fully in class discussions. Meanwhile, motivated, engaged peers can encourage participation and raise the level of discussion and debate in a classroom, actively enhancing their peers’ learning experience. On residential campuses, peer effects, both positive and negative, on learning are likely to be more profound. At “party schools”, pressure to take part in social events can reduce time spent on class work (Armstrong & Hamilton 2013). And ethnographic evidence suggests that students consider intellectual discussions with peers to be an integral part of collegiate learning (Moffatt 1989).

The literature on peer effects in K-12 education has found them to be substantial (Sacerdote 2011), but peer effects in higher education have only begun to be investigated. Zimmerman (2003) leveraging random roommate assignment at Williams College, found that students with modest SAT scores earned worse grades in their freshman year if their roommate was in the bottom of the SAT distribution. Similar results from designs which also exploited random roommate assignment were obtained by Sacerdote (2001), Steinbrickner and Steinbrickner (2001), and Winston and Zimmerman (2004) examining students at Dartmouth, Berea College, and in the College & Beyond data respectively. These studies are suggestive, but limited by their focus on elite students and restriction to “roommate effects”. Indeed, classroom peers are likely to be influential through their impact on a school’s learning environment. In his ethnography of a mostly working-class white community college in the mid-1970s, London (1978) documented intense apathy and disengagement among students, a valorization of practical over intellectual knowledge, and near-open defiance against faculty perceived to be ‘liberal’ or ‘snobbish’. This student culture, London suggests, dragged down students’ desire to continue at school by discounting the value of education further in their eyes.
There is a large literature investigating the impact of attending a more prestigious college\textsuperscript{21}; the balance of this research suggests that doing so improves the odds of degree completion substantially. Bowen and Bok (1998) find that, controlling for SES and prior academic performance, attending an elite college improves the odds of degree completion by 21%. Brand and Halaby (2006), employing a matching strategy, find that attending an elite college increases probability by 26 percentage points, and found larger effects on the sorts of students who were unlikely to attend elite colleges. Similarly positive impacts are seen for first-generation college-goers (Ishitani 2006) and Black and Latino students (Alon & Tienda 2005; Melguizo 2008). Cohedes and Goodman (2012), exploiting cutoffs in eligibility for a Massachusetts scholarship program, find that attending a less-prestigious institution reduced the probability of completing a degree in four years by 26 percentage points. This consensus is not unanimous, however; see Dale and Krueger (1999), Light and Strayer (2000), and Heil, Reisel and Attewell for alternative views.

Attending a more selective college may increase students’ probability of completion for a number of reasons. More selective schools enroll more academically oriented, motivated peers, and so selective school effects could be shorthand for peer effects. Second, more selective schools have more resources per student, meaning smaller classes and thus more direct engagement with faculty, more counseling and other resources directly aimed at retention, and higher institutional scholarships. They attract more prestigious, higher-quality faculty, leading to a richer intellectual environment. Finally, there may be a direct “prestige factor” whereby students perceive that graduating from a more prestigious university could be very valuable. This could involve the quality of social capital for enhancing students’ networks, or the “signaling” benefit of the high-cache name for getting into

\textsuperscript{21} The bulk of this literature, which I will not address here, concerns selective college effects on later employment and wages. See Gerber and Cheung (2008) for a review.
graduate school (Eide, Brewer, & Ehrenberg 1998) or landing a high-paying, high-status job (Riviera 2011).

A huge share of higher educational expansion has taken place at community colleges, but do these institutions hinder students from completing four-year degrees? A large body of scholarship has investigated this question, and the overwhelming conclusion is that community college enrollment is detrimental to bachelor’s attainment (e.g. Alfonso 2006; Long & Kurlaender 2009)\(^{22}\). Scholars disagree as to the reasons for this, with some suggesting that community colleges systematically “cool out” working class students into terminal vocational programs (Clark 1960; Dougherty 1994), others that they academically under-prepare students for the rigors of four-year college (Hills 1965), and while still others focus on the difficulties in transferring to BA-granting schools (Monaghan & Attewell 2015). Given that community colleges disproportionately enroll students from lower-SES backgrounds, the expansion of this sector has likely contributed to class disparities in degree completion. Bound, Lovenheim, and Turner (2010) find that the concentration of students at community colleges has contributed substantially to the decline in completion rates overall.

Finally, because much of the expansion in the four-year sector was in schools which are entirely, mostly, or effectively commuter campuses, the effects of on-campus residence are of interest. And indeed a consistent body of research that has found positive effects of on-campus residence, particularly in early years and for younger students, on persistence and eventual completion (Astin 1993; Pascarella & Terrenzini 2005). The reason seems to be that students living on campus are more likely to become involved in on-campus activities and to form strong and consequential social ties with other students.

\(^{22}\)Community colleges are thought to both expand opportunities for higher educational participation (“democratization”) and to reduce aggregate completion by siphoning away students who would otherwise have enrolled at a four-year school (“diversion”). Rouse (1995) found support for both phenomena, and that additionally they appeared to balance each other out, resulting in no net increase (or decrease) in bachelor’s attainment from the community college sector. This, of course, presumes a constant distribution of students among sectors, and does not consider what would have happened if more of the expansion that took place in the community college sector had instead occurred among the four-year schools.
They become, in Tinto’s terms, more *socially integrated* into the college institution (Tinto 1975), and develop stronger attachment to the universities they attend and to college-going in general. Through continued association with peers who are not enrolled, commuting students may be more regularly involved in a social rhythm and calendar that conflicts with school, and may have to negotiate social relationships which do not facilitate school completion. They are also more likely to have substantial familial responsibilities and off-campus work commitments which could crowd out studying time, leading to lower-intensity enrollment and eventual stop-out (Pascarella & Terenzini 2005).

I have thus far established that the transformation of higher education has increasingly segregated poorer, more academically challenged students in less-selective, less financially-endowed institutions. The research shows that the types of institutions which these students are more likely to attend – community colleges, less-selective schools, non-residential colleges, and colleges with less-academically prepared peers – tend to hinder students’ degree completion, at least relative to the types of institutions attended by wealthier, better-prepared students. What has yet to be established is whether there are disproportionate *effects* for poorer and less-prepared students of attending such institutions.

*Who Pays for School? Changes in How Higher Education is Funded.* It is no secret that tuition has been climbing steadily in recent years. The average cost of yearly tuition in 1981-2 was $15,310 at four-year private colleges and $6,940 four-year public colleges in constant 2011 dollars. By 2011-12 this had risen to $33,720 and $16,790 respectively (U.S. Department of Education, 2013). The reasons why this has occurred appear to differ depending on the type of institution. As Ehrenberg (2000) has convincingly argued, elite private institutions have raised tuitions because doing so enables them improve the quality of the education they offer and because they suffer no negative consequences in so doing. As their 23

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23 Ehrenberg is, here, building off Bowen’s (1981) “revenue theory of college costs”. Bowen argued that since colleges are prestige-maximizing institutions, they tend to raise all the money they can and they spend all the
tuitions have risen, so has the volume of applications they have received for barely-expanding enrollments. For non-elite private institutions the situation is somewhat different. Such schools do compete – with schools which are most similar in terms of prestige – in terms of price, but generally do so by listing a high tuition that is then discounted steeply for most students.

The story of tuition increases at public colleges is different. At public institutions, per-student costs have risen somewhat, but not nearly fast enough to account for the increase in tuition (Johnstone 2001). Instead, the rise of tuition appears to be mainly the result of declining state funding for higher education, a pattern evident since the early 1970s\(^\text{24}\) (Ehernberg 2006; Rizzo 2004). In large part, this seems to be due to increasing hostility of the electorate to tax increases. Archibald and Feldman (2006) show that appropriations for higher education are negatively impacted at the state level by the passage of either a tax and expenditure limitation or a supermajority requirement, both of which are policy innovations deriving from the “tax revolt” of the late 1970s which severely restrict the ability of states to raise taxes\(^\text{25}\). Additionally, spending on higher education is considered to be more “discretionary” than spending on, for instance, K-12 education, Medicaid, law enforcement or corrections. Therefore, in an electoral environment in which a state must meet demands without increasing taxes, there is a strong tendency for higher education spending to be crowded out. What is more, because it is perceived to be more discretionary, higher education spending is particularly liable to be cut, and cut deeply, during recessionary periods (Humphreys 2000). This places particular strain on the budgets of less-selective money they can raise. Without constraints on tuition-setting coming from student application or enrollment, most likely tuitions at the most elite schools are constrained mostly by public-relations concerns.

\(^{24}\) Historically, that is, prior to 1950, public education systems were funded almost entirely out of state general fund revenues, and tuition was kept low. The federal government played little role in financing higher education (outside of funding research) until the passage of the 1965 Higher Education Act.

\(^{25}\) Tax and expenditure limitations (TELS) typically limit the increase of property taxes to some percentage below the average rate of inflation, and supermajority requirements (SMRs) require a supermajority in the state legislature to pass further tax increases. An example of both is California’s Proposition 13, which limits property tax increases on any property to 1% per year, and also imposed a requirement of 2/3 of both state legislative houses in order to raise taxes. According to Archibald & Feldman, by 2006 23 states had passed a TEL and 13 had an SMR.
institutions such as community colleges, whose enrollments typically rise during economic downturns (Betts & McFarland 1995). Though higher education spending typically rises again when the economy improves, it often does not achieve the pre-recessionary baseline. The story of public higher education financing over the past 40 years has thus been one of a gradual shift of the burden of payment away from the population as a whole and onto individual students and their families.

As tuition has gone up, has grant aid increased proportionately to help students meet the cost of college? The answer is that grant aid has increased, but not by enough to keep pace with tuition. The biggest need-based grant aid program is, of course, the federal Pell grant program. And over the period from the late 1970s through the present, the real purchasing power of a Pell grant has fallen dramatically (St. John, Daun-Barnett, & Moronski-Chapman, 2013). Whereas in the mid-1970s the maximum Pell grant fully covered the costs of attending an in-state public four-year college, by 2010 it covered only about 30% of these costs (Congressional Budget Office, 2013). State need-based aid has risen (unevenly) over time, but also not by enough to keep pace with the rise in college costs and certainly by not enough to make up for the declining value of a federal aid. Meanwhile, states, and particularly Southern states, have shifted from need-based to merit-based grant programs such as Georgia’s HOPE and West Virginia’s PROMISE scholarships. As Dynarski (2004) has shown, these programs disproportionately benefit more affluent students, and can be seen as a political response to demands from middle-class constituencies for tuition relief. Indeed, because states have been shifting student funding from need- to merit-based aid, the proportion of all state aid accruing to students in the

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26 It is important to note that while the real value of a Pell has fallen, total spending on the Pell program has risen substantially in real dollars. This is mostly due to rising demand, though legislation relaxing eligibility requirements played a role as well. Expanding enrollment without corresponding increases in taxation lead to a situation where money is spread more and more thinly over an expanding pool of recipients.
highest income quartile increased by 38% between the mid-1990s and the late 2000s while the proportion awarded to those in the lowest fell by 10% (Woo & Choy, 2011)\(^{27}\).

The failure of need-based aid to keep up with the cost of attendance has left lower-SES students and their families with a higher college bills. They have met this situation in part by taking out student loans, which more than tripled over the past two decades from $31.3 billion in 1993-94 to $106 billion in 2013-14 (in constant 2013 dollars). Over this same period, these loans became more costly. Whereas in 1993, 64% of all loans taken out were subsidized Stafford loans (on which interest does not begin accruing until after students complete their schooling), by 2013-14 this had fallen to 24%. Meanwhile, the loan-share of unsubsidized Stafford loans rose from 9% to 49%, and non-federal (mostly private) loans rose from less than 1% to 9% of all loans (The College Board, 2014). Much of the aggregate increase in borrowing is due to increases in the prevalence, not the intensity, of borrowing - more students were taking out loans to go to school, but the average loan taken out rose only slightly in constant dollars\(^{28}\). However, because of statutory limits, more of this average loan was covered through the unsubsidized Stafford program. And the percentage of students taking out private loans - which tend to have high interest rates - increased from 5% in 2003-04 to 14% in 2007-08 (Woo 2011).

Students’ other options are to raise their incomes in the present through employment and to reduce their expenditures. And among 20 year olds, the percentage of students who were employed increased from about 40% to about 60% between 1970 and 2000 (Turner 2004). And of course, students can reduce the cost of going to college by beginning their schooling at a community college or by choosing to live at home while going to school.

\(^{27}\) Woo & Choy (2011, Fig. 3) shows that the percentage of all state aid going to the highest income quartile increased from 13% to 18%, while that going to the lowest decreased from 41% to 37%.

\(^{28}\) According to NCES, in 1989 18.6% of all undergraduates took out a Stafford loan averaging $2,600 ($4,514.42 in 2008). In 2008 this had risen to only $5000, but 34.5% of students were taking out the loans (Wei, 2010, Table 1.1).
So, to recap, the cost of attending college has increased for poor families because need-based grants have failed to keep up with escalating tuition costs. This has led to students having to fund college attendance through loans and increased work hours, or through choosing lower-priced education. What does the research say about the relationships between these different forms of financing and college completion?

A comprehensive literature review concludes that grant aid is a particularly effective form of financial assistance (Hossler et al. 2009). Goldrick-Rab and colleagues (Goldrick-Rab et al. 2009) summarize evidence from a number of randomized control trials which suggest that grant aid has a substantial impact on persistence in college. Bettinger (2004, 2010) employing quasi-experimental designs, estimated that positive impacts on persistence of 2-4 percentage points for every $1000 of grant aid. Similarly positive effects were reported by Dynarski in analyses of the Social Security Student Benefit Program (1999) and the Georgia HOPE scholarship (2008).

The impact of loans on persistence is less well-understood. A review of the literature on loans recounts mixed findings, with the balance tipping positive (Hossler et al. 2009). Net of other factors, Ishitani (2006) reports a positive but statistically-insignificant impact of taking out a loan on the probability of completing college among first-generation college-goers. Dowd and Coury (2006) find a negative impact of taking out a loan on the persistence of community college students, and no impact on degree completion. And Dwyer, McCloud, and Hodson (2012), using data from the NLSY-1997, show that while low levels of debt facilitate completion, debt in excess of $10,000 lowers the odds of completion, especially for middle- and lower-income students at public colleges. Unfortunately, there is not yet research on what is perhaps the most pertinent policy question: the impact of taking out a loan rather than receiving a grant.
Economists tend to emphasize that despite the high cost of tuition, the high rate of return to a college degree makes borrowing worthwhile – as long as one completes a degree (Avery & Turner 2012)\(^\text{29}\). But for students who are less confident that they will complete school, or that afterwards they will obtain a high-paying job, taking out a loan can be particularly worrying. There is some evidence that students who are from lower-income families, or who are at schools with more disadvantaged peers, are less inclined to see taking out a loan as worth the risk (Cunningham & Santiago 2008; Perna 2008).

Such students can work in order to reduce the size of the loan they need to take out. While researchers have tended to find that working part-time, particularly on-campus, has a beneficial impact on persistence (McCormick, Moore, & Kuh 2010), heavy off-campus work commitments tend to draw students’ attention away from school, reducing grades and leading to stop-out (Riggert \textit{et al}. 2006). Moreover, in combination these adaptations seem to be particular inimical to completion. Bozick (2007), for instance, finds that living at home and working more than 20 hours per week is associated with lower odds of persistence than living on campus and working fewer than 20 hours per week, particularly among those who report working to pay school expenses.

The methods open to students to reduce higher education costs also reduce their likelihood of completing. We have already seen that starting at a community college and commuting to school rather than living on campus reduce the overall likelihood of completion. Attending college part-time is the other option open to students, and it is fairly well-established that this has sizeable negative impact on persistence and completion (Adelman 1999; Attewell, Heil & Reisel 2012; Jacobs & King 2002).

\(^\text{29}\) Avery and Turner offer this rather unrealistic suggestion: “The natural advice for a high school graduate... is to estimate the probabilities of long-term outcomes as precisely as possible. In particular, a student needs to focus on the probability of degree completion, the earnings associated with different levels of degree completion, and the choice of a field of study. Although self-knowledge is difficult, students can look at their observed traits, and then at how students with similar traits have fared at the school they plan to attend".
Before moving on, it should be mentioned that public colleges have potentially another strategy for coping with declining state appropriations beyond tuition hikes: they can reduce costs. There is modest evidence of such cost-cutting beyond anecdotes summarized in Ehrenberg (2006). The most striking evidence comes from comparisons to private schools. The faculty-student ratio at public colleges rose between 1971 and 1997 from 21.1:1 to 21.7:1 while falling from 17.3:1 to 15.7:1 at private colleges. Per-student spending at public colleges was 72 percent that of per-student spending at private schools in the mid-1990s; this was down from 78 percent in the 1970s. The ratio of faculty salaries at public and private colleges also fell, from 91 percent to 78 percent over the same period. Bound, et al. (2010) find that a third of the decline in completion rates at public colleges was due to falling per-student resources (operationalized through faculty-student ratios). In a separate study, Bound, Lovenheim and Turner (2012) find that declining resources at public colleges and universities explain much of the rise in time to degree among BA earners between the 1970s and 2000s.

Another method of cost-cutting is to switch to non-tenured faculty, and indeed the academic labor force has become increasingly contingent since the 1970s. Whereas in 1975, only 43% of all faculty was non-tenure track, by 2003 this has climbed to 65%. However, this does not appear to have occurred principally or disproportionately at public colleges. In 2005, contingent faculty made up 54% of all appointments at private doctorate-granting institutions and only 44% at public doctoral-granting colleges. Though contingent faculty are quite commonly encountered at community colleges (80%), this is clearly not a strategy restricted to the public sector (American Association of University Professors, 2006).

There is some evidence that completion is negatively impacted by the heavier use of part-time faculty. For instance, Jacoby (2006) finds that, net of school size and demographics, community colleges which utilize higher proportions of contingent faculty have lower graduation rates. Eagan and Jaeger (2009), using student-level data from California, find that community college students exposed to more
part-time instruction were less likely to transfer to a four-year school. Ehrenberg and Liang (2005) utilize institutional-level panel data, and find that a lower concentration of tenured and tenure-track faculty has a depressive effect on completion rates at four-year colleges.

To summarize the arguments of this section, over the past forty or fifty years, the higher educational sector expanded greatly, but did so in a manner which increasingly concentrated less-prepared, more disadvantaged students in the most poorly funded institutions. The weight of research evidence suggests that precisely the types of institutions which poorer students have come to attend are the ones which are most difficult to graduate from. Over this same time period, a tax revolt has increasingly shifted the burden of paying for higher education from the public at large to students and their families. Since grant aid has not risen fast enough to keep up with tuition, students have had to resort to loans and employment to pay college costs. While grants have been shown fairly consistently to improve the odds of persistence and completion, the evidence is mixed in the case of loans and fairly clearly shows that full-time work has negative effects. Meanwhile, cost-cutting measures instituted by colleges also likely have negative impacts on retention.

As a result, college has become fairly objectively more difficult to complete, and to complete quickly, especially for students in the lower half of the socioeconomic spectrum. This in turn has, along with the declining preparation of the marginal college student, increased the number of individuals who make it to 25 with some college but no degree. It has, in short, increased the stock of potential, and actual, adult college-goers. The last piece of the puzzle involves a “push” factor to send those with incomplete degrees, and others, back to school.

*Rising Inequality and the Value of a Degree: Changes in the Labor Market*

It is also no secret that inequality has risen dramatically since the early 1970s, but the causes of this increase remain a subject of great debate. An influential group of economists, led by Claudia
Goldin and Lawrence Katz (2009), has argued that most of the rise in inequality is traceable to increasing returns to education, and in particular a rise in the college premium. This, in turn, has occurred because the supply of educated workers has failed to keep pace with increasing demands for skill in the labor market. Recent advances in technology, exemplified by but not restricted to computerization, have led the demand for skilled labor to increase far faster than that for unskilled labor, while the increase in educational attainment in the population sputtered to a halt sometime in the mid-1970s30.

Though researchers may dispute the causal role of technological change or the supply of college-educated workers31, that educational premiums have risen over time is in little doubt. Researchers, however, tend to write as if the increasing college premium has been through the wages of college graduates rising faster than those of less-educated workers, or at least rising relative to stable non-college wages. This is, however, not the case. Between 1979 and 2012, while the average hourly wage of a college graduate increased by 21%, the real hourly wage of high school graduates fell by 5% and that of high school non-completers fell by 21% (Mishel & Shierholz 2013).

An alternative perspective to that of Goldin and Katz in accounting for these divergent trajectories emphasizes the weakening of labor-market regulating institutions. Three changes are prominent here. First, the decline in unionization is thought to weaken wage-equalization within industries, but also to result in lower wages for less educated workers generally through a deterioration of the “moral economy” which established norms of economic equity for union and non-union employees alike (Western & Rosenfeld 2011). Second, the declining value of the minimum wage permitted inequality to expand at the bottom of the income distribution (Card & DiNardo 2002). Finally,  

30 This interpretation of the causes of rising inequality was something of a consensus among economists in the 1990s (Juhn, Murphy & Pierce 1993; Krueger 1993; Katz & Murphy 1992), but has since been subjected to serious revision and critique (e.g. Card & Dinardo 2002).
31 Sociologists Western, Bloome & Percheski (2008) found that the increasing returns to education explain only about 12% of the overall rise in inequality between households from 1975-2005, and that most of the escalation in inequality is due to increased income variance within groups defined by education.
the “internal labor markets” of employers became more unstable, reflected by declining male job tenure in the private sector (Farber 2010). As a result of these trends, income volatility increased substantially (Moffit & Gottschalk 2002), reflecting what Hacker (2006) has described as the “great risk shift” from employers to households.

Whatever the cause – technological changes that value skill, or institutional changes which render incomes across the board more insecure but concentrate risk among the less educated – it is clear that life has become more precarious for individuals without a bachelor’s degree. Though some stable, well-paying jobs which don’t require degrees continue to exist, they are increasingly rare. The unionized private sector was, for the postwar period, the blue-collar alternative to college for reaching the middle class. Today, one of the few remaining preserves of the non-college middle class is the public sector, and in recent years public sector workers have come under increasing political assault. As a result, returning to school has come to be an increasingly enticing option. Though earning a college degree no longer uniformly pays off as well as it did perhaps a generation ago, it still dramatically increases one’s odds of reasonably stable, reasonably secure employment at decent wages.

*Putting it Together: Marginal College Attendance in Lean Times*

In this section, I have suggested that adult undergraduate enrollment ought to be understood as the product of a) a higher education system which is relatively open and accessible to all, b) the expansion of higher education to include individuals whose academic preparation would have led to non-participation in prior periods, c) changes in higher education that have made it more difficult for disadvantaged students to complete and d) economic forces undermining the ability of those without a college degree to obtain economic security. Factors a) and d) explain why there is a high rate of enrollment; factors b) and c) relate to why there is a low rate of timely completion. A reduction in any of these forces would likely decrease the presence of adult undergraduates on college campuses.
High rates of adult education are an expression of what Turner (1960) called the American system of “contest mobility”. In this system, avenues for upward mobility remain nominally open to all until relatively late in the life course, despite prior failures. Systems of contest mobility therefore encourage their members to never give up trying to better themselves, because in improving one’s circumstances always remains forever possible, however unlikely. As a consequence, such systems discourage the disadvantaged members of such societies from perceiving real structural constraints on their probability of success and to instead account for their lack of progress as a result of individual failure. Accordingly, the American higher education system permits numerous – really, unlimited – chances at the degree and all it promises, but the road to it is difficult, and increasingly so as one gets older and acquires additional demands on one’s time and attention. Still, as we shall see, older undergraduates soldier on, and some do indeed make it to a degree.

**Plan of the Dissertation**

In the following sections, I explore adult undergraduate enrollment in greater detail. Delaying or dropping out of college is part of the prolonged path through higher education, and in the next chapter I explore factors which lead to these two behaviors. I do so by drawing on a series of interviews with 37 adult undergraduates I conducted between fall 2013 and spring 2014. The use of qualitative data from in-depth interviews allows me to explore delay and drop-out decisions as contextually determined, and the result of multiple influences, and varying among individuals. I find that among females, familial restrictions and responsibilities play a major, but often indirect role in leading to the interruption of schooling. I find no such similar pattern among men. Instead more prevalent among males is a sense of aimlessness during the transition to adulthood, especially among more marginal students, resulting in both delay and non-completion.
After this, Chapter 3 explores the relationship between non-traditional enrollment patterns and the broader transition to adulthood. To do so, I tap data from the National Longitudinal Survey of Youth 1979 cohort (NLSY79) and a relatively new method for describing patterns in longitudinal data called sequence analysis. I find that the transitions to adulthood of non-traditional students are more similar to those of non-college goers than they are to those who complete college rapidly. This suggests that college is an institution which is geared towards those who delay other aspects of adulthood - full time employment, marriage and children – until it is completed.

Next, I draw on the same dataset to identify determinants of the return to schooling among adults without their BA in Chapter 4. A number of findings are significant here. I find that women and minorities are, on the whole, more likely to return to school than men and whites, but that those whose parents have a college degree are substantially more likely to return to school as well. Economic insecurity plays a role in leading to the return to school among both men and women, as involuntary job loss in the prior year is a predictor of the return to school.

In Chapter 5, I again tap my interview data to dig deeper into the determinants of the return to school among adults. I find additional support for the notion that economic pressures play a role in leading many adults back to college, but also support for the force of approaching deadlines in internalized life-calendars. Finally, in Chapter 6 I return to the NLSY79 to examine the impact of adult schooling and completion on wages and attainment of job-based benefits. This analysis leads to the conclusion that while increased schooling and degree attainment appears to result in better wages and benefits, women appear to benefit far more than do men. Conclusions and policy recommendations follow.
Chapter 2

Time Out of School: Motives for Delaying and Dropping Out of College

The slow pace with which the proportion of Americans holding bachelor’s degrees has risen has become a matter of considerable concern to a number of influential scholars and policymakers. Indeed to some, it is indicative a looming crisis of tremendous proportions, threatening American economic competitiveness (see, in particular, The College Board 2008; Spellings 2006) and requiring far-reaching reforms. Whether or not such apocalyptic rhetoric has a basis in reality is a matter of some dispute (Hauptman 2012). But is certainly true that bachelor’s attainment has risen more slowly than college attendance and that while the US ranks among the leading nations in the world in terms of college access its rate of degree attainment is somewhat less impressive. Slow growth in degree attainment is not principally a result of limited college access, but rather to when such access occurs and what happens after enrollment. The focus shifts, that is, to delayed enrollment and to drop-out.

Delay and drop-out are of concern for another, potentially more important reason than their negative impact on the national accumulation of human capital. Though some delayed attendance and interrupted enrollment are the result of individuals consciously and confidently choosing alternative life paths, a good deal of both are substantially involuntary. And, to the extent that they are involuntary, delay and drop-out result in real costs to individuals in terms of money, years, and intangibles like hope, self-confidence, and self-respect. They represent diverted life plans, thwarted dreams, lives that fail to meet expectations, cul-de-sacs of effort and expenditure. What is more, they are more common among

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32 Hauptman notes that much of the alarmist rhetoric has its basis in a misreading of statistics. For instance, that the percentage of older Americans and younger Americans with a college degree is quite similar has been taken to indicate that the educational attainment of the population is stagnant. Hauptman notes that this ignores the crucial contributions of continued education over the life course to a cohort’s attainment (as clearly indicated in Chapter 1). Further, some have noted with shock that a number of OECD countries appear to have overtaken American levels of college attainment in recent years. Hauptman notes that this is the result of some countries having higher rates of sub-baccalaureate attainment, and that these disparities have existed for quite a long time.

33 The US ranks 7th in the OECD in college access and 12th in the proportion of adults with a college degree (OECD 2014)
the socioeconomically disadvantaged, and are thus a mechanism through which class disparities are reproduced in the era of mass college participation. Understanding how exactly delay and dropout come about can inform efforts to make them less common.

This chapter will contribute to our understanding of the causes of delay and dropout by drawing on life-history interviews with thirty-six adult undergraduates. The testimonies are a rich source of data on these matters because nearly all adult students either delayed entry substantially or interrupted their enrollment at least once. Indeed, most of the respondents are reflective of the majority of today’s college-goers in having complex enrollment histories involving multiple institutions, enrollment spells, and interruptions of varying lengths of time. While there is a great deal of existing research on the causes of both delay and attrition, most studies have involved quantitative analysis of survey data. Such studies are capable of identifying the statistical correlates of these behaviors, but can at best generate speculation as to the processes through which they come about. Narrative life-history data can fill in this gap by situating enrollment decisions within the flux and flow of individual lives, and revealing the contexts in which the decisions were made as they were experienced and understood by the actors themselves.

Prior Research on Delay and Stop-out

Higher education research has generated a number of theoretical models to explain student withdrawal from college. The leading model, developed by Vincent Tinto (1975, 1987), emphasizes a student’s integration into the collective life of the college, which has two component aspects: the academic and the social. The academic sphere consists in instruction, classes, grades – it is the formal purpose of the college and its stated reason for being. But no less important is the social life of the college, which takes place chiefly amongst fellow students and involves both participation in organized activities such as clubs and sports as well as informal socializing and the development of friendship.
groups. According to Tinto, student departure is caused by inadequate integration into either sphere of college life. Integration, in turn, is a function of the “fit” between a student’s values and the values which predominate at the college. Student background influences the propensity to persist through these values, and particularly through commitment to the goal of attaining a degree.

Astin’s (1984) competing model focuses, by contrast, on student involvement, defined as how much “energy” the student puts into both classes and the social life of the campus. He argues that other apparently relevant factors operate through their influence on this key variable. Accordingly, Astin counsels colleges to look upon “student time” as “the most precious institutional resource”. To the extent that colleges can convince students to devote their time to active involvement in both the formal learning process and the social life of the campus, they will increase retention. Astin notes, though, that there is tremendous self-selection into involvement: students who feels themselves to “fit in” better with their college environment are more likely to become heavily involved in campus activities than those who perceive themselves to be outsiders.

Both Tinto’s and Astin’s models were developed principally to explain dropout among “traditional” college-goers: those who live on campus at residential schools, and whose lives are structured to a great extent by the collegiate world. Formal tests of Tinto’s theoretical model have found it to be useful when applied to residential college students (Elkins, Braxton, & James 2000; Terenzini & Pascarella 1980), but to perform less impressively in explaining retention among commuter students (Braxton, Sullivan, & Johnston 1997).

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34 Cultural “fit” is explicitly foregrounded in more recently-developed models of student persistence, such as those of Berger (2000) and of Kuh and Love (2000). The former paper emphasizes cultural fit deriving from class background, whereas in the latter ethnicity is the key source of cultural difference. See Braxton and Hirschy (2005) for an extensive review of further theoretical work in this area.
Consequently, Bean and Metzner (1985) proposed a separate model of persistence for non-traditional students, who, they argue, differ in three relevant ways. First, non-traditional students are less likely, by situation and inclination, to become socially integrated into college life. Second, their motivation in attending school, and thus their orientation to the college, is more exclusively academic. Finally, their off-campus commitments and responsibilities are far more considerable and consequential. In their model, such students’ environmental conditions - their family responsibilities, finances, work hours and demands, and encouragement from external actors – are of primary consequence for continued enrollment, dramatically outweighing the impact of academic factors such as major certainty, course availability, advising, and grades.

This model has found support in a number of empirical studies. Metzner and Bean (1987) conducted a test of their own path analytic model, finding modest indirect impacts of student finances, outside encouragement, and work hours on the probability of dropout for non-traditional students. Cabrera, Nora, and Casteneda (1993) find that external support and encouragement has a strong impact on the probability of persistence. Gilardi and Guglielmetti (2011), in a study of Italian students, uncovered a negative impact of work hours on nontraditional student persistence. And Taniguchi and Kaufman (2005) find that college completion among older students is impeded by being divorced, having responsibility for young children, and part-time attendance.

Recent empirical research on delayed entry and non-completion has taken place largely without reference to formal theoretical models and has instead focused on identifying empirical predictors. The literatures which investigate these two phenomena, though separate, consistently identify the same variables as impactful. Non-completion has also been consistently found to be negatively predicted by both socioeconomic status and student academic ability (Adelman 1999, 2006; Attewell, Heil & Reisel 2011; Bowen, Chingos, & McPherson 2009; Ishitani 2006; Taniguchi & Kaufman 2005). Completion rates

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35 Bean and Metzner define “non-traditional students” as older, part-time, or commuting.
are lower among males (Buchman & DiPrete 2006), those who attended high schools with more disadvantaged populations (Camburn 1990), students from single-parent families (Ver Ploeg 2002), and those who initially enroll at community colleges rather than four-year schools (Long & Kurleander 2009). Delayed entry, the subject of a smaller literature, is more common among males, members of disadvantaged minority groups, students from lower socioeconomic backgrounds, and students who had lower high school grades (Bozick & DeLuca 2005; Goldrick-Rab & Han 2011; Hearn 1992; Rowan-Kenyon 2007).

The impact of student age on completion is less clear. While Taniguchi and Kaufman (2005) find that older students are less likely to complete college net of other characteristics, Jacobs and King (2002) find no age effects once enrollment intensity (part-time/full-time) is accounted for, and Calgano, Crosta, Bailey, and Denkins (2007) find that net of academic ability older students are more likely to complete than younger students. There have also been conflicting results with regard to race and ethnicity, with some studies finding that, net of other influences, minorities have a higher probability of completion (Jepsen 2008), and others finding the opposite (Kao & Thompson 2003).

Data and Methods

Potential Contributions of Qualitative Research

The research summarized above derives entirely from quantitative, variable-driven analysis of survey data. As Abbott (2001) has argued, such analyses tacitly subscribe to a fairly unrealistic vision of the world in which variables, not people, possess agency. This image of the world, he argues, is not only ontologically false, but is also at variance with the theories of action sociologists tend currently to find most convincing. The theories of Giddens (1984), Bourdieu (1977), and Coleman (1994) all emphasize the agency of individual actors, albeit while acknowledging that actors are situated in social and cultural contexts largely not of their own making. Moreover, they depict individuals as knowledgeable and
active interpreters of the social world who engage in meaningful purposive action to achieve particular goals.

Applied to college delay and dropout, these insights indicate the need to grasp not simply the incidences of such behaviors and their social and institutional correlates, but the substantive logics that inform and constitute decisions in the minds of actors themselves. Variable-based research can, at best, “gesture furtively” in the direction of such logics. When presenting results, quantitative researchers often tell speculative stories about actors’ decision-making processes in order to make results sensible. Indeed, theory sections of quantitative papers are usually involve specifying sets of candidate thought processes which might be occurring in actors exposed to given situations; results are interpreted as indicating which of these candidate stories is most likely to be true given the data. Such practices do not, however, thereby confirm that any actual actor has made the decision for the reasons proposed, only that many have acted as one would expect them to act had such thought processes actually been informing the actions under consideration.

Retrospective narrative data has its own epistemological difficulties in this regard. A brief, but by no means exhaustive list of such difficulties includes:

1) that the subject (in the present) relating actions and thoughts is not precisely equal to the subject (in the past) whose actions and thoughts are being described;

2) that memories can be and are revised in order to accommodate the story of self that the subject presently wishes to believe and present;

3) that retrospective interviews intrinsically ask respondents to impose a sensible narrative order on the chaotic flux and flow of life, and that as a result interviewees select some facts, avoid others, and generally cast facts in a light which renders them consistent with an overall narrative;
4) that the interview is itself a social interaction which involves the respondent telling the story of their life to another person, and that “social desirability bias” in this setting can lead subjects to falsify or distort facts, or to put the best face on them;

5) that the account given by the interviewee is influenced by the social identity of the interviewer and interviewee especially insofar as differences in these identities are reflective of prevailing patterns of subordination and domination;

6) that the interview data is selectively interpreted/read by the researcher in a manner unavoidably influenced by the researcher’s values, reflexive beliefs, and assumptions.

Each of the headings above is the subject of an immense, unresolved literature which I will not address here. Suffice it to say for now that retrospective interviews do not permit unmediated access to the truth of past thought processes; data derived from interviews must, like all data, be interpreted with such weaknesses in mind. Still, the insights which can be gained from life-course interviews are substantial and unique. Interviews leverage the fact that agents have privileged access to their own thoughts, beliefs, and motivations, and are better able than other methods of data collection to capture the crucial import of agents’ own interpretations of their own actions and situational contexts.

Recruitment and Interview Protocols

Data for this chapter, as well as for Chapter 5, come from interviews conducted with 36 adult undergraduates recruited at a public college system in a large metropolitan area. Most interviewees were recruited through face-to-face encounters near their colleges; others volunteered in response to in-class announcements. To be eligible for inclusion, subjects had to be at least 25 years of age, and to be either presently or very recently enrolled in a post-secondary institution for the (ultimate) purposes

36 In point of fact, most if not all of these objections hold, in principle, for quantitative data as well provided that this data derives from surveys.
of obtaining a bachelor’s degree. Efforts were made in the recruitment stage at purposive sampling, particularly to ensure that members of prominent race/gender groups were represented and that the sample included students at both community colleges and four-year schools. In order to accomplish this, I recruited at a number of the system’s campuses, each of which has a different socioeconomic and demographic profile. Nonetheless, as I did not have access to a population list, recruitment was in no way random and the sample cannot be considered to be representative.

Interviews averaged just over one hour in length, and subjects were provided a small monetary compensation for participating. Demographic, educational, and attitudinal data was collected from subjects via a questionnaire administered prior to the interview. The format of the interviews was that of the semi-structured life history with a focus on the subject’s educational experiences from adolescence to the present. Subjects were provided with a list of sample questions ahead of time, but were explicitly informed that this list represented a loose outline and not a verbatim script for the interview. Interviews were recorded, and recordings were subsequently transcribed by a third party vendor. I then checked the transcripts for errors and corrected mistakes where necessary.

The full set of data consists of thirty-six textual transcriptions, each averaging roughly 27 pages, for a total of around 950 pages of text. Audio interviews from which the texts derive total more than 38 hours in length; audio recordings were consulted throughout coding for additional non-verbal data such as intonation, emphasis, hesitation, interruption, laughter, etc. Interviews were coded according to a set of relevant themes, but this set was iteratively expanded, contracted, and altered throughout the analytical process. For a more detailed discussion of recruitment, interview protocols and procedures, and analysis, see Appendix 1.

_Sample Characteristics_
Characteristics of survey respondents, culled from questionnaires, are presented in Table 2.1. Respondents are just over 50% female, and 75% are people of color; this reflects conscious attempts at adequate representation of males and females of different racial/ethnic groups, as well as the diverse composition of the base population. Respondents are quite varied in terms of age: the majority of respondents are between 25-34 years old, but almost a quarter are 40 or older. Compared with national figures cited in Chapter 1, interview respondents are perhaps most dissimilar in terms of personal family experiences. Fully two-thirds have never been married, and only one-third have children. But in keeping with national patterns, most of the respondents are employed, and those that are work an average of over 30 hours per week. The students in this sample are not wealthy. Most qualify for need-based aid (Pell grants, state need-based aid, or both). Loan aversion was in evidence for a number of respondents during interviews, and this is reflected in the fact that more students worked full time than taking out loans.

The last few lines in this table indicate precisely why interviews of adult students can shed so much light on delay and stop-out: both are modal experiences for these respondents. In fact, only three respondents neither delayed enrollment nor left a program incomplete, and six both delayed enrollment and stopped out. As is the case with most adult students, the enrollment histories of these respondents are far from straightforward. Seventy-five percent had already attended more than one institution by the time of interview, and for only 31% can this be accounted for as a normative “upward transfer” (community college to a four-year school). As is the case with the broad, though marginalized majority in modern American higher education, the journey through college for the interviewees has been difficult and disjointed, involving tentative and often delayed first attempts, multiple transfers among institutions, and programs started and abandoned partway through.
Table 2.1: Characteristics of Interview Sample (N=36)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 25-29</td>
<td>36%</td>
</tr>
<tr>
<td>Ages 30-34</td>
<td>25%</td>
</tr>
<tr>
<td>Ages 35-39</td>
<td>17%</td>
</tr>
<tr>
<td>Aged 40+</td>
<td>22%</td>
</tr>
<tr>
<td>Female</td>
<td>55%</td>
</tr>
<tr>
<td>Latino</td>
<td>33%</td>
</tr>
<tr>
<td>Black</td>
<td>25%</td>
</tr>
<tr>
<td>White</td>
<td>25%</td>
</tr>
<tr>
<td>Multiracial/other</td>
<td>17%</td>
</tr>
<tr>
<td>Foreign-born</td>
<td>22%</td>
</tr>
<tr>
<td>Never married</td>
<td>67%</td>
</tr>
<tr>
<td>Married</td>
<td>25%</td>
</tr>
<tr>
<td>Has children</td>
<td>36%</td>
</tr>
<tr>
<td>Lives with spouse/partner</td>
<td>31%</td>
</tr>
<tr>
<td>Lives with parent(s)</td>
<td>19%</td>
</tr>
<tr>
<td>Lives with other family</td>
<td>17%</td>
</tr>
<tr>
<td>Employed</td>
<td>75%</td>
</tr>
<tr>
<td>Hours per week, employed students (average)</td>
<td>31.4</td>
</tr>
<tr>
<td>Works 35+ hours</td>
<td>48%</td>
</tr>
<tr>
<td>Need-based aid</td>
<td>58%</td>
</tr>
<tr>
<td>Took out loan</td>
<td>33%</td>
</tr>
<tr>
<td>Attending community college</td>
<td>39%</td>
</tr>
<tr>
<td>Ever attended community college</td>
<td>72%</td>
</tr>
<tr>
<td>Ever attended four-year</td>
<td>77%</td>
</tr>
<tr>
<td>Downward transfer</td>
<td>16%</td>
</tr>
<tr>
<td>Upward transfer</td>
<td>31%</td>
</tr>
<tr>
<td>Delayed enrollment</td>
<td>53%</td>
</tr>
<tr>
<td>Ever stopped out (1 year+)</td>
<td>58%</td>
</tr>
<tr>
<td>Attended multiple institutions</td>
<td>75%</td>
</tr>
<tr>
<td>Ever interrupted – financial reasons</td>
<td>42%</td>
</tr>
<tr>
<td>Ever interrupted – academic reasons</td>
<td>14%</td>
</tr>
</tbody>
</table>

Results

*College is Not for Me: Non-College Orientations and Delayed Enrollment*

As individuals approach normative time for college enrollment, they have some sort of conceptualization of their relationship to college as an institution and whether or not participation lies in their future. This normative time is, of course, the termination of high school for high school
completers, but there is an analogous period for those who have dropped out of high school: when persisting cohort-mates are approaching the end of high school. What determines whether or not an individual has a “college orientation” (i.e. a desire to attend and belief that they will do so) is both their understanding of what “college” is and their self-conceptualization; these two understandings together may lead them to think that college is something that they can and want to do, or not. The majority of respondents reported having at least vague plans to attend college while they were in high school, but a substantial minority did not.

Among those without a college orientation, there were different factors at work. Some respondents reported believing that college wasn’t possible for people from their social background. One respondent reports that “for some reason, I grew up thinking college was expensive. I didn’t know nothing about financial aid... I thought school was for people who had money.” Another says that “I think that if you would ask me at 17 what I thought about college, well, first of all I thought you had to get straight A’s to get into college... Yes, and money. There was a sense, if I can remember, that you need a lot of money to go to school”. Both respondents grew up in working-class households, and report that college was rarely discussed in either their school or peer-group. They grew up near both community colleges and minimally-selective four year schools; that these institutions existed was simply unknown to them. They didn’t opt out of college; they just didn’t know that attending was possible for people “like them” until much later.

Other students understood that college was indeed possible, but it was something they were either not interested in or believed themselves to be behaviorally ill-suited for. For Ramon Salcedo, both factors obtained. When he was approaching eighteen, “I had convinced myself that I wasn’t built

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37 One of these respondents was in her late 40s, and so had grown up in an era in which college-going was less common in working-class communities. But others were, at interview, in their late 20s, and so had gone to high school in the 2000s.

38 All names in this chapter, and in Chapter 5, are pseudonyms.
for school... I didn’t have the skill sets, academic skills I guess. And I didn’t have the skills and to sit in the class and do well for two to four years.” At the same time, college didn’t seem necessary: “Didn’t really think much about education, you know, trying to improve myself through education. I figured I can land the right job. I also saw myself as a blue collar kind of guy. I thought if I get the right gig I’ll be alright.” There is, for Ramon, a sense in which not being “built for school” is both an evident deficit, as well as something positive: evidence of an energetic, rebellious masculinity. He continually describes his teenage self as “rebellious” and “living for the moment”. Going through the tedium and daily submission of school was not something he was interested in doing, nor which he felt capable of doing. He describes himself as having strong will-power, but “I never thought I could apply that to school. Like it’s is not for me, you know?”

James Gray, on the other hand, saw himself as entirely capable of college, but saw it as unnecessary and undesirable:

I hated high school because I was the only openly gay person in school and I got a lot of flak for that crap up until I was 15...So but I was just over it. And the idea of going to college, it was like four more years of just putting up with crap literally for free and it was like what’s the point? I’d rather just go out and make money and hang out with my friends and just go forth and enjoy life, so that’s what happened.

He graduated from high school in the late 1980s and moved from his suburban town into a nearby city where, according to him, employment opportunities were plentiful. He had become, through the city’s gay scene, friends with people who also hadn’t been to college and had decent-paying jobs, and these friends served as evidence to confirm his suspicion that college wasn’t required in order to make a decent living as well as contacts to connect him to good jobs. Indeed, James emphasizes the importance of his social capital throughout the interview – “my whole life is based on a friend of a
friend”, he reported. He notes that his first “adult” job was obtained through a parental contact, though most of his other contacts were developed, he says, initially through his involvement in the gay club scene.

I mean we are talking about like 1987 so getting jobs back then was literally a piece of cake. I mean the paper had a classified section, you know, came out every Sunday. It was like that thick (places his fingers about a centimeter apart) and you just got jobs. It was like easy.

James Gray is the exception among those with a non-college orientation in his conscious rejection of college, and it is probably significant that he alone among them hails from a middle-class background. For him, not going to college appeared as a decision; for the others, college did not appear, really, as a possible – for someone like them.

*School vs. Immediate Experience: Ambivalent College Orientations and Delayed Enrollment*

On first appearance, it would appear a college orientation is a dichotomous variable – one either has it or does not. And this is because, for a fair portion of the population, college orientation is fairly unambiguous. But it is in fact a matter of degree, and a substantial portion of the population views the prospect of enrollment with considerable ambivalence. These ambivalent feelings help account for the decision of some respondents to delay schooling. It should be mentioned from the outset, though, that the relationship between an ambivalent orientation and delayed entry is not a clean one, in contrast to the results of a non-college orientation. Many respondents who were ambivalent about college in fact enrolled immediately out of high school, while a subset of delayers had a strong college orientation. But two examples will underscore what an ambivalent orientation consist of and how it can result in substantially delayed enrollment.
Joseph Massa’s experience is the positive version of this story. He was raised in a middle-class family in a suburban town; college attendance was, according to him, both expected and the actual trajectory of most of his high school classmates. However, he decided, as graduation approached, not to enroll:

You know I just – I decided that I wasn’t going to and I was kind of an impulsive decision... I didn’t want to you know join the masses and kind of be herded into college when I didn’t really know what I wanted to do. I was ready to you know experience some things and you know... I wasn’t going to do it because everyone else is doing it or I was expected to do it.

He describes having a desire for direct experience of the world, and saw enrolling in college as prohibiting the accumulation of such experience:

I think at that time I was just very, you know, I was just wide open to the world and having, you know, interesting experiences and taking risks in doing things that, you know, I wanted to do... It was very much this, you know, being in the moment and, you know, living for today and kind of see where the wind takes me kind of thing.

He accredits this outlook to the values with which he was raised. Though his father held a bachelor’s degree, Joseph says that his parents emphasized their children’s happiness and autonomy above all else. He said of himself and his siblings that it was “important that we did our best” in school, that they “worked hard”, but for his parents what took precedence was “raising happy, well-adjusted kids”. This translated to an easygoing attitude towards college attendance:

As we got older and, you know, it was time to look at colleges, they weren’t so much, definitely not demanding or even very pushy about going to college you know...
decided not to go to college after high school and they were supportive of that. And it’s like because they understood that I was who I was and where I was at, I wasn’t ready and weren’t you know the type of parents to force that issue.

Beneath these comments, what is evident is a sense of security with which Joseph regarded – and indeed still regards - the world. He did not feel that not going to college would negatively impact his life course. This was, no doubt, in part because of his goals – the prioritization of happiness and satisfaction over achievement – but it was also a function of resources. Joseph chose to “go backpacking in Europe” with a friend rather than go to college; this implies disposable income, whether his own or his family’s. In his recounting of his young adulthood, he described living in a number of different cities, often with older siblings, and supporting himself through odd jobs. He saw himself at eighteen as neither deciding to never go to college, nor necessarily deciding to delay it until later. Instead, what emerges from his account is a feeling of freedom to avoid considering the matter at all. For Joseph, a middle-class white male, there was the possibility to not only not go to school, but to not even have to decide whether one is deciding.

This is not to say that Joseph came from a wealthy family; his father was a probation officer who later became a social services lawyer, and his mother, a high school graduate, did not work. They raised a total of ten biological and foster children. Money, Joseph says, wasn’t palpably tight, but there was also no sense of material affluence. And it is clear from his narrative that as a young adult he mostly supported himself. Still, relative privilege emerges in four ways. First, Joseph’s family was itself secure in terms of income and did not need his help. Second, he was able, in a pinch, to call in parental resources. Third, there was an understanding of the nature of the education system such that he knew that he could decide to go to college at any point. And there is one other factor here: Joseph is white,
male and heterosexual. This status leads him to feel that he will be able to move just about anywhere in the United States, be safe, and be evaluated in terms of his merits when seeking employment.

The role of privilege is clear when we contrast Joseph’s narrative with that of Philip Mendoza, a young man who is in many ways similar but who also lacked some of Joseph’s advantages. Phillip was born to an affluent family in the Dominican Republic, but after immigrating to the US with his mother at a young age he lived in poor, largely Latino urban neighborhoods and attended disadvantaged urban schools. He returned to D.R. in adolescence and attended an elite private high school there in grades nine through eleven. And he managed to attend a college-oriented, selective public high school in the U.S. during his senior year. Though Phillip had deliberately chosen this college-oriented high school, when it came time to apply to college, he was unsure whether he wanted to go:

So I did want to (go to college) but then at the same time I didn’t want to because I felt like education, I mean education was great and all but I think it was a distraction from like living your life and just finding out who you were as a person. Because we live in a culture that’s so – we live in a society that sort of collectively consciously like mandates what you are supposed to do. So I was kind of battling with that in high school but I did want to go to college and but then I didn’t, like I wanted to experience my life and I ended up not going.

For Phillip as for Joseph, going to school is contrasted with the real world, with authentic direct experience, and he objects to going to college immediately simply because there is a social norm that one is supposed to go to college at a certain age. For him, direct experience of the real world was essential for personal development and self-knowledge:

Because you know when you come to college like you really don’t know what the hell you want to do. You are trying to find out who you are and you’re just being rushed into...
college, like herded in like a bunch of sheep. And it just doesn’t even give you time to – it doesn’t even give you time to help develop your creative mind.

Both Phillip and Joseph objected to being “herded” into college, because they felt that in one’s late teens and early 20s going to college can inhibit the healthy formation of identity. By simply following the middle-class script, by simply going into college, one forfeits this crucial moment of self-discovery.

Phillip opted for work and for travel as well. Unfortunately, in contrast to Joseph’s narrative, for Phillip these were both principally negative experiences. In the service industry jobs he took, he discovered “how they take advantage of you”, and how decisions to promote appeared to be made on racial grounds. Upon travelling, “I decided to go to different states and Texas really threw me off. It was a very racist state”. As a result, he now believes that upon leaving high school he was naïve.

At that point I believed that there was no evil in the world. I looked at the world through pink lenses and I just thought that everything would be fine. In high school especially here they indoctrinate you to believe that this country is a great country and we are all equal and as I grew up I noticed that that’s not true.

According to Phillip, it was these negative experiences which led him so decide to enroll in college.

It is, of course, impossible to explain the difference in life trajectories between two people to any one particular cause or set of causes. It is true that Phillip is gay, Latino, and was raised by a single mother in a largely working class neighborhood while Joseph is white, straight, and was raised by both biological parents in a middle-class suburb. It is also true that both have middle-class cultural origins, and viewed on-time college enrollment in strikingly similar terms. They both returned to school (Joseph
enrolled at the end of his 20s, whereas Phillip delayed for only a few years) and majored in sociology with the intention of becoming social workers. But their experiences of life without a college degree, and indeed of the world in general, were quite different, and far more bruising in Phillip’s case. While Joseph expresses no regrets about his path through life, Phillip now values his decision to delay only because it allowed him to experience what he sees as a necessary disillusionment regarding how the world works.

*The Heavy Hand of Family and the Price of Freedom*

The contrasting of different avenues of identity attainment - school versus “direct experience” of the world - echoes a distinctly American ethos expressed in novels such as *On the Road*. Such novels extol the unrelenting hunger of their male heroes for intense and extensive experience, and their total commitment to gaining this experience. But is this anti-intellectual hunger for experience restricted to males? Historically, only males have been socialized to think of themselves as free, capable, and powerful enough to eschew safety and security in the name of experience. And it is possible that today this archaic masculine virtue could be playing a role in driving male academic achievement down relative to that of women. After all, the contrasting of schooling with “real knowledge” is related to the valuation of masculine virility and physicality that according to Willis (1977) contributes to working-class males’ rejection of school. A version of this tension between school and the virtues of masculinity was evident in Ramon Salcedo’s self-construction as not capable of making it through college.

Are there women who are driven away from school by a similar desire for experience? The case of Justine Kohler provides a way of beginning to answer this question. Justine, a white woman in her early 30s, was raised in a lower middle-class suburb by blue-collar parents. She attended a Catholic high school that was extremely college-focused, and was herself highly college-oriented throughout high school. But when her father died her senior year, she decided to forego college for the time being and
move to a big city: “I think I realized that I don’t want to live in (home state) anymore,” she explained. “Having nothing to do with my family but just the mindset of – the general mindset of most of the people that live there; they’re very conservative, they’re not open-minded.” This impression was cultivated by a coworker who wanted her to move with him and who described people in the city as “open-minded” and insisted that there was “so much more to life than living in (state)”. Justine began to contrast life in her hometown to the cosmopolitanism of the big city, and moved away because she wanted to experience this fuller life. Once in the city, her plan to go to college was shelved because she was too busy having fun: “So when I came here I just – and because of my dad and that whole situation, I totally let loose and I went out. And I was working with older kids who were old enough to get into bars.”

Here we seem to see something of the same desire for excitement and direct experience that would be foregained by going to school that we saw in both Joseph Massa and Philip Mendoza. However, there is a crucial difference. For Justine, life in the big city is contrasted not to college, but rather to the town where she grew up. This is, in turn, connected to her family. In Justine’s senior year, her father became terminally ill; he died in the late spring. This left her alone with her mother, who was emotionally unstable:

She just freaked out when my dad died, because they married when they were in high school; that’s all she knew. And he was the breadwinner – yeah, she had a job but he was the breadwinner of our family. He was also like the emotional and mental stability in our family; because anxiety and depression run in her family. So she would have her bouts of – I wouldn’t say bouts of depression – but she couldn’t handle upsets very well...Before he died, he told one of my aunts; like, I’m worried about the kids but I’m
mostly worried about my mom, because he thinks she’s going to handle it the worst;
and she did.

What also changed was the plan that had been made for her college attendance. Before her father’s illness, she had been planning to go away to college. Upon her father’s death, her mother entered a spiral of grief and depression, and she was expected to forego her previous plan to go away to college in order to stay at home with her grieving mother. In this context, her escape from her small town was also an escape from a suffocating family situation.

The difference between a Justine Kohler and a Joseph Massa is, then, the role that family responsibility plays in her narrative. Responsibility to one’s family, and control of one’s decision-making by family, are themes that recurred in a number of narratives, but only those of females. Moreover, familial influence often played a role in explaining why it was women delayed or dropped out of college. However, this influence played out in multiple, complex, and often indirect ways.

Sometimes, respondents portrayed themselves as accepting familial responsibilities with equanimity. Tonya Morgan, for instance, was in her second semester at a selective public four-year college, which she was attending on full scholarship, when her mother became ill:

My mother got real sick. She had a stroke and there was no possible way I could be at school and my mom in (home town) and I am 18. I came home. It was – I loved being in the dorms off away from home. My brother went to (Ivy League College) so we – he is two years older than me and we loved going away. When she had the stroke I decided to come back, he decided not to. He’s like Tonya, no you can’t, but it’s my mom so I came back and that was just that. It changed of the course of my life.
Her narrative prior to this was one of unproblematic orientation towards college attendance: her parents demanded it, and she “loved school” and was her high school’s valedictorian. After her mother’s stroke, she left college and did not return until her early 40s. But she is not bitter about this; indeed she goes to great lengths to express this sacrifice as freely chosen and strongly discouraged by at least part of her family.

However, others saw their familial responsibilities as foisted upon them. Elisa Thompson recalls that when she turned eighteen, she was expected to begin contributing financially to her household and to help care for her younger brother: “I completed my freshman year, no problem. Now getting to my sophomore year, that’s when everything got changed. Because I am 18 now, so I am expected to bring money into the household.” Her mother, who suffered from a mental illness, was not working, and according to Elisa, would threaten her with the possibility of a nervous breakdown if Elisa raised objections to her situation. Clearly, this became a burden for her:

I am working from like 4 to 11, 3 to 11; I got to go home. I live in the [neighborhood]; I am working [in a distant neighborhood], so I am getting home like midnight, you have to do homework, then helping out with my brother. So I am not getting to bed till like 3 to 4am and then you are up again at like 7am. Class is like 9 to 12, you have a short break and I am typing something up and then straight to school. So you have no room for yourself, you have no space or time for yourself.

Her grades began to slip as a result. The inciting event for her withdrawal from school was, she says, when her mother borrowed money that she needed to pay a registration fee and failed to return it on time. Elisa says she felt betrayed by her mother at that moment. But more, she felt trapped by her extended family’s expectation that, after age 18, she was an adult and ought to be the one to care for her mentally ill mother. Eventually, with her family’s help, Elisa was able to extricate herself from her
mother’s grasp and return to school. Her narrative, however, is one of a strong college orientation derailed by her mother’s demands for her time and labor and her extended family’s support of those demands.

Even more common, for female respondents, was theme of the over-protective family from which they sought to escape. Olivia Machado was supported in her desire to go to college by her parents. Her mother objected, however, to her choice of career. “Well, when we spoke about it she would relate it to herself,” she explained. “You know, I’ve had no greater joy than having you. By you committing to be a doctor, there’s a good chance that you won’t even get married; no spouse, no children, where’s the happiness?” Her father disagreed and pushed back on her behalf. Eventually, her parents reached a compromise career (regarding her future). “In the end they decided, well how about a pharmacist? You can be a pharmacist and you’d still have 9-5 hours and you’d go home. You can still have everything if you’re a pharmacist.”

In addition to selecting her career, her parents insisted that she go to a school that she could commute to, and picked out the school for her. She enrolled in an accelerated pharmacist program, but became depressed and dropped out after a little more than a semester. She felt like she failed at school but was in some ways happy to drop out: “It was stress relief. It was always important to me after it became important to them.”

In other female respondents’ accounts, dropping out from school results indirectly from attempts to attain freedom from familial control. Alma Soler, for instance, lived at home while attending community college, and her family continued to insist upon controlling what she did socially. They don’t really believe in like going out. I had a curfew that I had to be home by 9:30 or 10 o’clock, even after high school. And so even if I wanted to go to the movies with like my church friends; because I was like genuinely like a good kid. I didn’t really do
anything bad; I hang out always with the good crowd; I was not really interested with anything like that. But even if I wanted to go to the movies, they wouldn’t let me out. So it was really hard for me to deal with that; I felt really constrained.

Two developments of importance merged at this time in Alma’s life. First, her parents’ expectations did not shift when she graduated from high school, and Alma clearly expected that they would. In Alma’s eyes, graduating conferred a more adult status and entitled her to more freedom. But she remained at home under her parents’ roof, and to her parents she was not so different from what she had been during high school. Second, Alma was coming to terms with her homosexuality, and was feeling increased need to “sneak around” on parents who would not approve of her dating a woman. Deciding she needed to change her situation, and earning some money from a part-time job, Alma decided to get an apartment with a friend. Her parents did not react well to this.

They were really upset when I moved out. And so they were like, so you want to live your own life and you want to do this thing, then you can keep your car, but I want your license plate; you are not going to be on our insurance and you are going to be on your own phone bill. So they kind of like cut me off financially. So now I am like struggling to pay my half of the rent and I swore to them I was still going to go to school. I was like no, I am still going; this is going to be important to me – whatever. So at that point that fall, I was going to school fulltime in the evening and working fulltime; so I would work like 9 – 5 and then have classes like 6 – 10 and like four days a week. And of course I have to drop; I ended up dropping two classes because I was not doing well and it wasn’t working out the way I expected it to work out.

After one semester of this, she dropped out of school.
Family influence is only outsize relative to expectations. Some of these are doubtless retrospective; Olivia Machado, for instance, acquiesced to her parents’ control at the time, and even now believes that they did the best they could under the circumstances. But in these cases, there is a discrepancy between parental attempts to constrain their female offspring’s choices, usually out of a protective impulse, and the young woman’s desire for autonomy and belief that she is entitled to this autonomy. It is doubtless also relevant that three of the cases cited above involve daughters from immigrant families. In these cases, the discrepancy between parental beliefs and offspring’s desires is partly cultural, as the children’s expectations for autonomy derive from what they witness their peers experiencing.

Though outsize familial influence takes different forms, we can reduce the phenomena described above to two general themes. First, some females are expected to contribute to their families of origin to an extent that this can interfere with their ability to pursue schooling. This can occur even when their families are ostensibly interested in their offspring’s schooling success. It is expected that female children will be able to manage both schooling and caring, and that in the event of conflict they will temporarily sacrifice schooling for family. Secondly, families sometimes impose restrictions on their female offspring’s behavior in order to protect them from perceived danger. Though well-intentioned, these efforts can frustrate and discourage their children, or drive them to take measures to reclaim their autonomy which render them unable to continue school. With non-representative samples of this type, one cannot make inferences about the prevalence of certain phenomena in a broader population. However, it is certainly suggestive that family influence and demands for time factor heavily in the narratives of nearly half of female respondents who dropped out of college, and in none of the narratives of male respondents.39

39 It is, of course, possible that male respondents simply didn’t mention the role played by family responsibility in leading to college withdrawal. But in interviews, I queried respondents in depth about their families, and many
What Do I Do Now? Stalled Transitions to Adulthood and College Withdrawal

For some students even persisting in high school is tenuous. The school attendance of teenagers with little school attachment becomes increasingly sporadic until they decide, at some point, to leave altogether. This withdrawal is even sometimes encouraged by school administrators; three respondents reported being actively advised by school officials to drop out of high school and earn their GED.

At the other end of the spectrum are students who have internalized a forward momentum towards college. For such students, the transition to college immediately following high school completion is all but assured; indeed, anything else would be unthinkable. There is no need to convince such students that college would be a profitable idea. They need only be shown how they go about choosing a college and enrolling.

For students in between these extremes, however, the end of high school can be fraught with uncertainty. It is a moment when they are suddenly expected to have a plan for their future. Moreover, whether or not they have a plan, and what this plan is, becomes primarily their concern and their problem. One respondent described this moment in the following terms:

I was like - yeah it was scary (laughs). I was like oh crap what do I do now kind of thing. Like that’s definitely something that I went through, kind of like, what now? And I mean some people that they didn’t think about that during high school, once they graduate then, like, okay, now I don’t have to go spend certain amount of hours in school. Now what, I have to get a job or something.

male respondents talked at length about family dynamics and influence. But in only one case did a male respondent cite family at all in his decision to leave college: a respondent said he withdrew in order to help his mother economically during a time when money was tight. But even in this case, the respondent emphasized that this decision was voluntary and at his own initiative, and it was clear that he was already directionless and struggling in school. My suspicion is that in his case, his family’s ostensible need provided an altruistic cover for a decision he was going to make anyway.
For middle-class teenagers, and increasingly for working-class teens as well, the default plan is to go to college at this point. But one cannot relate to college with the same passivity with which most students relate to high school. One must, first of all, choose a college and make the effort to enroll at it. And once enrolled, one needs to figure out the purpose of one’s attendance – what one is “doing there”. Though the choice of a major or a career is not essential at initial enrollment – indeed, having a solid plan runs counter to the notion that students should use their college years as a time of self-discovery - ultimately, students need to arrive at a goal, however provisional, in order to successfully complete college. It is this moment, in which one is staring into the abyss of self-directed adulthood, which trips many students up on their way through college. Disengagement from school because one has no purpose, no reason to be there, can result in decreased effort and lower grades, and eventually in withdrawal from school altogether.

Modern societies have mostly eradicated the heritability of occupation, and this is on balance a tremendous source of freedom and opportunity. The freedom – and necessity - to choose one’s adult role, one’s place in the labor market and therefore the world, can however be experienced as a terrifying abyss. This can lead to paralysis, to an aimless casting about. Moreover, the erosion of the secure blue-collar employment of the Fordist era means that that without a college degree one is less likely to find a job that will support a relatively stable existence. For many, this is not experienced as problematic. Opportunities unfold, their abilities are confirmed in academic success, and they are rewarded with lives that match, or nearly match, their ambitions. But others have a difficulty latching onto any track; the opportunities that are there for the less educated (mostly in the service industry) do not seem to provide the foundation for adult life, and they are left casting about for a way to go. For some, college provides a solution; others, a way of delaying decisions; still others, a false promise of direction and purpose.
Some students can successfully use school as a stop-gap measure. One student described his decision to attend the local community college in these terms. “I think it was also somewhat of a method of prolonging the necessity to have make a decision, you know, I’m in [high school] now, I’m just going right across the street. You know, so I still have time to figure out what I wanted to do.” And he chose to major in liberal arts for a similar reason. “So once again a general type of major where I didn’t have to make any type of decisions, to still prolong the necessity to make a decision.”

For other students, a feeling of purposelessness can undermine academic progress directly. Greg Gager was raised in a middle-class suburb by blue-collar parents. He believes his parents didn’t sufficiently motivate him academically, but assigns blame to himself as well. “I was a difficult student. I was always pretty smart, which pissed everybody off because I always got bad grades.” He describes himself as the “class clown”, acting out in order to get attention, and not working very hard in school. He does not appear to have been in danger of failing out of high school, or of dropping out or not graduating. High school was a place that he went, tried to have fun, and tried to get through with the minimal effort required. His approach to school fit in well with what he felt was expected of him. Greg is precisely the sort of student who, in large American high schools, falls by the wayside. He never performed badly enough or acted out severely enough to raise real alarms, but he also never impressed his teachers. He was permitted to simply continue on from year to year until the years ended.

He says that at his high school, college attendance was considered the natural next step, and most of his friends, indeed, enrolled in college the fall after graduation. Greg planned to go to college but doesn’t report putting much thought into where. He says that he had planned to “buckle down senior year” so that he could go to college; and that “I was probably planning on going to school for computer science because I was kind of a computer nerd at the time”. However, he says that he “met a
girl and started partying and getting high and kind of checked out my senior year”. He never actually applied to college.

At the end of high school, with no plans, he was unsure of what to do next. And like many young men who feel they lack direction, motivation, or purpose, he signed up for the military. He did so not because he felt any particular draw to the armed forces but because “I wanted to get as far away as I could and the fastest way to do that that I could think of was to go in the service.” This turned out to be a false solution as well. Six months after enlisting, a company commander, noting Greg’s apparent discontentment, pulled him aside and asked him if he wanted to quit (this occurred in the 1990s, prior to the beginning of the wars in Iraq and Afghanistan, so military retention was not as much of a problem). He took opportunity to exit, and was soon back at home living with his parents.

Greg bounced around between a few jobs, went to trade school, and then enrolled in college for the first time, deciding to major in journalism because he felt that he had always been good at writing. He selected a college that was in-state, and which was located in a town to which a friend had recently moved, so “I had a place to live”. But college didn’t stick either: “I wasn’t really engaged by any of it. I mean, there was only one class I really remember where I felt like I learned anything and I liked the professor”. He worked a fair amount to support himself while in school and was distracted by work and socializing. He didn’t do well academically, accumulated few credits, and decided to drop out after two years. And it wasn’t until over a decade later, after two marriages, a child, and a number of different jobs that he eventually returned to college.

Throughout his narrative, Greg portrayed himself as searching for direction, trying out a number of socially prescribed paths into adult life and not finding one that was satisfactory. Though he cast some blame on his parents, he aimed most recrimination at himself for his inability to devote effort to schooling. But what is most clearly in absence is a sense of goal-orientation. In his first stint at college,
Greg chose his major because of what he believed were his strong writing skills - his writing had won approval from his peers in the past - and not because he had a strong motivation to work in journalism. In the working world, he has been able to find jobs, but none that he wanted to keep for longer than a couple of years. His life has, in his narration, been a series of false starts, and college was merely one more.

This pattern is not restricted to men, though it seemed to be more prevalent among my male interviewees. But without a focus in school, some female respondents also felt adrift and purposeless in school. Joselyn Moreno, for instance, initially enrolled in college with the goal of becoming a television journalist. She quickly decided that she despised communications classes and changed to being a liberal arts major, feeling that she would have time to figure out what she wanted to do while at school.

I was just like I’m gonna just take the general classes of what I need and from there I’ll figure it out... I went through a point where I was like I don’t even know what I want to do with my life. I felt like all my friends had like this life plan like this five year plan and they were all working on it and I was just like stuck in limbo. I didn’t know what I wanted to do.

Joselyn dropped out of school shortly thereafter, feeling guilty that her mother was subsidizing an education that wasn’t necessarily going anywhere.

Lower down on the economic spectrum, the consequences of directionlessness can be more severe. A number of respondents from working-class or poor backgrounds described their parents as most concerned, after high school, that they not be idle. As one women described it: “My grandmother and father really stressed like you got to go to school; you have to do something. But my grandmother was like that; you got to go to school; you got to get a job; you can’t be and just do nothing and nothing comes free.”
“Doing something”, whether it be school or work, as a parental injunction makes sense in a context in which idleness – and therefore dependency - is a real possibility. Another respondent recalls her parents talking frequently about family members who didn’t provide for themselves.

They kind of compared it to other family members that didn’t go to school and kind of staying with other family members like that, and they kind of say, like you don’t want to be like them. They would be negative like calling them names like bums and stuff but I mean some way I can definitely understand that because they just chose not to do something about it.

Idleness in this context becomes not only an individual problem, but a problem for the whole family, because the idle family member becomes dependent on those who do work. Not being a burden, being self-sufficient, is thus an individual moral responsibility which the family works hard to inculcate as a means of self-defense against collective disaster.

Money Matters: Financial Reasons for Drop-Out or Delay

Given consistent empirical research showing that family resources positively predict going to college (Goyette 2006), and that increases in aid enable people to both attend and to continue in school (Dynarski 1999), I expected a lack of financial resources to figure prominently in respondents’ narratives of why they decided to delay or drop out of school. And indeed, 42% of interviewees indicted in the questionnaire that they had to “suspend going to college for financial reasons in the past”. Nonetheless, lack of money was mentioned infrequently in connection to delay and dropout decisions during interviews. Instead, respondents on the whole portrayed the colleges they attended as reasonably affordable. This is could be because most chose to attend relatively low-cost schools (tuition in the system where I conducted research is well below the national average) and because so many - well over three-quarters - received grant aid – Pell grants, state need-based aid, or Veteran’s assistance.
Financial considerations did arise, however, but in a complex fashion. Two respondents cited inadequate financial aid as a reason for not continuing in college. Federal financial aid authorities determined that their household income was high enough that their parents could pay for part of their schooling – an ‘expected family contribution’, or EFC. But in both cases, respondents’ parents neither expected to make this contribution, nor did they feel that they could afford it. They believed that their daughters (both were female) ought to receive financial aid or, failing that, pay for their own schooling – after all, they were out of high school and therefore adults. In other words, though the government determined that these students were ‘dependents’, their parents in effect disagreed.

When Lesia Brown applied for financial aid she was eighteen and considered to be her mother’s dependent. Despite her parents being divorced, both her mother and father’s salaries were factored into the calculation of her EFC. At the time, her father’s financial contribution to the household was small, and the possibility of mother’s paying for Lesia’s tuition apparently never arose. Quite the opposite: Lesia had been working and giving her mother money to help out since high school. Though she reports being a good student in high school, she received very little college counseling and ended up only applying to her local community college. She did not want to take out a loan to pay for school, and never had any counseling regarding that decision, either at school or from her parents. To pay for her tuition and other expenses, she increased her hours at her retail job to full time. She describes her freshman year schedule as follows:

So I usually worked pretty early; I felt like the early shifts were good so I’d wake up like maybe 5:00, get to work at 6:00, 7:00. Then off like later in the afternoon, 4:00pm. I would go home, take a shower and then head on to like – I would take like two late classes. I would probably take like 6:00 to 8:00 and the 9:00 to 11:00pm class and then I would kind of go home.
This gave her about five hours to do homework and sleep before beginning the process all over again the next day. After two semesters of this, she decided to take some time off. “I remember feeling just exhausted and I just got tired of, like, having to deal with money and school so I just said, oh let me just focus a little bit on myself.” She did not return to college until she was able to be evaluated for financial aid based on her own income, when she turned 25.

This narrative reveals a number of important points related to the influence of economic pressures on enrollment decisions. First, formulas for determining eligibility for financial aid presume that families are willing and able to make the contribution that they are determined to be able to make. But many families, and in particular working-class and immigrant families, perceive eighteen year-olds as adults, and adults are expected to be either independent of or net contributors to the household. As one respondent expressed it, “When you turn 18, you are considered an adult, so when you are considered an adult, that means I am no longer necessarily responsible for caring for you; things that you need, you are now responsible for. You are not a baby anymore.” Another explained that “there gets a point like in the community... where your parents think once you are 18 you have to support me or you have to basically find a job and pay money to stay in my house.” It is important to note that the student’s well-being, and not the parents’, is impacted as a result, though they play no role in the decision. Financial aid rules presume that parents view funding their offspring’s education as at least partly their responsibility. If parents do not perceive this to be the case, or believe they are unable to make the contribution, the student is left to fund their own education or to forego it.

Second, it is presumed that students can and should take out loans to finance their education. Economists are near-unanimous in their declaration that debt-financing of education is a financially rational decision, because on average individuals receive a handsome return on their collegiate investment over a lifetime. This academic certitude, however, is cold comfort to an eighteen year old whose family has struggled to pay their bills and stay out of debt for her entire life. Many such students
are understandably apprehensive of beginning their independent adult financial lives in considerable
debt. This is particularly unnerving if they are not certain that they will complete their degree; and given
that the majority of college-goers do not complete a degree in six years, this is no unreasonable fear.
Working their way through school simply appears to be the safer route, even if it competes for time and
attention with school and might delay completion by many years.

Finally, in Lesia’s case, the role of finances is indirect. Lesia didn’t drop out of school because
she could no longer pay; she dropped out because financial pressures led her to adopt a schedule that
was unsustainable. Such schedules, in which working, school, and (often) familial responsibilities leave
little if any time for homework or sleep, were very common among the adult undergraduates I
interviewed. They were frequently cited as reasons for failing grades and stop-out in the past, and many
expressed concern regarding their capacity to sustain such schedules over the years of school necessary
for degree completion. Most respondents, indeed, were more troubled by *time poverty* rather than by
the direct monetary outlay required by school. Particularly troublesome was not time actually spent in
class, for which they budgeted, but the time required for things like homework, their commute to and
from school, and meeting with other students (on group projects). It was much harder to predict these
time requirements, and to factor them into their schedules.

A common practice among respondents was to avoid financial difficulties by taking short breaks
from school – a semester off here and there – or by enrolling in fewer classes in certain semesters.
Respondents made little mention of these practices unless specifically prompted, seeming to consider
them to be normal, unremarkable attendance strategies, and they didn’t consider taking a semester off
to constitute an interruption in enrollment. For Gelisa Davis, for instance, the use of such strategies
extended her undergraduate education to almost a decade.
When I was going to (community college), I don’t know what was going on with me at that point, because I was paying out of pocket for each semester – like I was getting partial aid, then I would have to pay for a couple of things. And when I did, I would go to school one semester, work, save up money to pay for the next semester, so the next semester I would take off. Go to that semester, take the semester off, so it was taking almost a lifetime to get out.

Gelisa never left school for more than a year at a time, and never felt like she was withdrawing from school when she did so– rather, she was taking planned time off in order to be able to continue school. She worked full-time for the entire period, and credits having a sympathetic boss as crucial to helping her continue her schooling.

Thus, financial pressures did considerably constrain respondents’ educational experiences, but typically indirectly. Indeed, for most respondents, financial strain formed an accepted, expected backdrop to their entire life narratives – it was the presumed context in which they made all decisions, and was thus unremarkable. They simply assumed that money would be tight, and they employed a number of standard strategies to compensate for this. Some of these strategies led to delayed completion, but this was also unremarkable because taking four years to graduate was not considered a norm, and because school was rarely the only or even most important activity they were involved in at the time.

Conclusions

Students both delay and interrupt college-going for diverse reasons, and the foregoing, while by no means meant to an exhaustive cataloguing of such reasons, is illustrative of this diversity.

40 Because my sample is both small- and non-representative, it is undoubtedly the case that there are many other causes of college delay and departure that simply did not occur to any of my respondents. Indeed, my
Nonetheless, a number of patterns are apparent. First, some individuals do not enroll in college because they don’t perceive college to be a possibility for them. For some such people, it is less useful to think of non-enrollment as the result of a decision so much as tacit acquiescence to (mis)perceived realities. Others, however, are fully aware that they could enroll, but perceive themselves to be temperamentally unsuited for the college environment. In the case of Ramon Salcedo, this self-perception was simultaneously experienced as a deficit and as evidence of an irrepressible vitality. This remains something other than a pure choice, or preference, for non-enrollment. It is probably significant that respondents who perceived college to be impossible or themselves to be unsuited for it were from working-class families and communities where college was rarely if ever discussed. Respondents who saw delaying college as a conscious choice on their part tended to be from middle-class backgrounds, and to have been raised with the expectation of attendance.

For a large subset of respondents, delay and dropout resulted from difficulties encountered in the broader transition to adulthood, but this seemed to play out differently among males and females. For females, difficulties in making the transition appeared to result from external interference, from being hindered by demanding or controlling families. Ironically this manifested in two apparently contradictory patterns. The first involved women who felt ready for full adulthood, but whose families are hesitant to grant them full autonomy. The second involved women whose families equated their turning eighteen with full adulthood responsibility – meaning full responsibility for their college tuition and sometimes an expectation to contribute financially to the family. Both familial assumptions contradict with prevailing norms regarding the status of “emerging adults” in the broader culture. The normative “emerging adult” status combines complete or near-complete autonomy with minimal responsibility – indeed, even a degree of continued parental support (Arnett 2000). Such norms are respondents are all adult students, so I am discussing causes of delay and interruption among students who eventually returned to school, and those who return might leave for different reasons than those who do not return. Finally, there were motives for delay and departure which obtained for some respondents that I simply elected not to discuss.
reflected in higher education practices and policies – such as the calculation of aid eligibility relative to household income. It may be significant, though, that the conflict of familial expectations with institutional practices and cultural norms only appeared to impact female respondents.

Among males (as well as a smaller group of females), the difficulties encountered in the transition to adulthood were internal, and took on an almost existential quality. Individuals struggled with having to decide upon a course that their young lives would take, in the absence of strong normative signals or guidance from institutions or elders. Many such individuals enrolled in and attended college very half-heartedly, because nothing else made more sense to do and because it was what most of their peers were doing. Indeed, today the transition to adulthood normatively involves college attendance. For many middle- and upper-middle class teenagers, the transition from high school to college has become a seamless, friction-less process; everything in their upbringing leads them to regard college attendance and completion as inevitable. And among many youngsters from lower-middle and working-class backgrounds who display an academic flair, college becomes part of an upward mobility narrative which they are able to profitably internalize.

But for those who fall in to neither of these groups – who are not affluent, whose parents (often) didn’t complete college, and who have poor to middling marks in high school – going to college is often more problematic. Such individuals were only partially exposed to the college mandate: it was talked about as something that they ought to do, but there remained to this talk a vague externality, as if it only half-applied to them. Often the necessity of going to college was expressed in negative terms: you can’t expect to make a decent living if you don’t. But this is potentially inadequate to motivate college completion. Why are they there, other than to avoid the nebulously awful fate of the un-credentialed? Indeed, for such students, the advice to “finish college or you are going to struggle” may be internalized not as an admonition but as a set of equally plausible options.
Respondents who were college-oriented, faced few familial obstacles, and who had a strong sense of why they were attending college had still to surmount financial obstacles. The respondents in this sample mostly came from working-class and poor backgrounds, and had a tacit expectation of scarce resources and a tenuous capacity to finance their education. They had a set of strategies for coping with material scarcity, which mostly involved scaling back schooling and working more hours or taking another job if necessary. These difficulties were rarely experienced as catastrophic events, and they did not lead to cessations in college attendance that respondents felt to be permanent. Rather, temporary stopping out was thoroughly incorporated into a repertoire of adaptive practices. Engaging in such practices seemed unremarkable, but often delayed completion of a degree by a number of years.
Chapter 3

Non-standard College Attendance and the Transition to Adulthood

The period of life immediately following adolescence, called variously youth, young adulthood, or emerging adulthood, is a busy one – it is “demographically dense” in the words of Rindfuss (1991). During this period of life, people gain additional training and education, choose jobs and careers, enter fully into the workforce, move to new regions or even countries, meet and marry partners, and have children. In short, they become adults. The transition from adolescence to adulthood is not simple or quick; as Hogan & Astone (1986) note, it is best described as a “process” which unfolds haltingly over years. This process often involves experimentation with different jobs, ways of living, lovers, and friends, resulting in an accumulation of diverse and intense experiences through which fully “adult” identities are forged.

In modern American culture, the passage to adulthood is a highly informal, individualized, variable, and contingent process, and when precisely adult status has been attained is unclear (Arnett 1994, 1997, 2001; Pallas 2006). Though normative pathways into adulthood have been discussed by researchers (Hogan 1978, 1981), one of the consistent findings of the sociology of the life course is that deviation from these pathways is the rule, not the exception (Marini 1984; Oesterle et al. 2010; Rindfuss, Swicegood & Rosenfeld 1987). Researchers have also established that in recent decades the transition to adulthood has become more prolonged, its component events delayed, and the sequencing of these events more variable (Billari 2010; Buchman 1989; George 1993; Heinz & Krueger 2001). Any number of factors may be driving this - an increasingly difficult labor market for those without a college

41 Qualitative work by Arnett and Pallas cited strongly establishes that most Americans understood adulthood’s attainment in psychological terms – such as taking one’s responsibilities seriously – rather than through reference to some objective life event like marriage or parenthood.
degree, a rising age at first marriage, an increasing incidence of non-marital births, or high rates of marital dissolution.

Another potential contributor, however, is the expansion of higher education and the resultant diversification of pathways through it. Prolonged education is known to have a profound effect on the timing of events such as employment, marriage and childbirth (Marini 1985; Thornton, Axinn & Teachman 1995), and college attendance is a factor by which different latent class pathways into adulthood are distinguished (Oesterle et al., 2010). But much of the transition to adulthood literature makes a tacit assumption that college attendance corresponds to the “traditional” pattern – occurring at traditional ages, accomplished in a single continuous spell, and preceding the transition to full-time work – a pattern which has become less prevalent over time. Part-time, delayed, and discontinuous attendance patterns have extended higher educational participation far beyond “traditional” ages, and the boundaries between full-time work and college attendance have become highly porous. The impact of such non-standard attendance patterns on the broader transition to adulthood is, however, generally unknown.

In this chapter, I will investigate the transition to adulthood as it plays out in relationship to non-standard patterns of college attendance. Specifically, I investigate patterning in the transitions to full-time work, marriage, and childbirth among individuals whose college attendance extends after age twenty-five. In what follows, I first integrate the literature on the life course and the transition to adulthood with more recent research on non-traditional college attendance patterns. Next, I introduce a kit of quantitative analytical methods known as sequence analysis which I employ in order to analyze patterns of school attendance, work, marriage, and childbearing for the National Longitudinal Survey of Youth’s 1979 cohort.
My findings suggest that the transition to adulthood is substantially more standardized for those who engage in the normative “collegiate” pattern of college attendance. Non-traditional students and those who do not attend college display far more variance in their life course transitions owing to more unstable employment, higher rates of marital instability, and earlier childbirth. The collegiate pattern corresponds to normative patterns of sequencing, and is predicted by higher socioeconomic status, suggesting that both normative college enrollment and a normative path into adulthood are mechanisms for the reproduction of class advantage.

Concepts and Prior Research

The Transition to Adulthood and the Life Course Literature

The modern study of the life course, inaugurated in Elder’s (1974) cohort study of the Great Depression generation, spans several disciplines but is dominated by sociologists (Elder 1998). Though Mayer (2009) has claimed that this literature lacks a unifying theoretical foundation, it seems that when conceptualizing the structuring of the life course at a given historical juncture – synchronically, that is - a consistently structural-functionalist conceptual framework tends to be at least implicitly employed - one that leans particularly heavily on role theory (George 1993)\(^42\). Individuals are conceptualized as moving through a succession of socially-defined, ordered life stages as they age (Hogan & Astone 1986; Settersen & Mayer 1997), a phenomenon conceptualized as age structuring. In the modern West, these stages are, roughly: infancy, childhood, adolescence, young adulthood, middle adulthood, later adulthood, and old age. One’s socially defined life stage, or “social age”, is characterized by certain “age norms”, age-graded sets of “expectations, privileges, and constraints” (Elder & Rockwell 1979; Settersen & Mayer 1997) which “constitute a basis for self-definition and specify appropriate behavior” (Elder

\(^42\) When analyzing changes in the structuring of the life course over time, researchers typically use a Weberian framework which stresses the importance of industrialization and the development of state institutions in impacting the timing and standardization of life course transitions (Buchman 1989; Mayer & Schoepflin 1989; Modell, Furstenberg & Hershberg 1976; Kohli 1986)
Individuals who fail to behave in a manner consistent with their social age are subject to formal and informal sanctioning (Macmillan 2006; Macmillan & Eliason 2003). Norms also dictate the appropriate timing for making the transition from one age-group to another (Neugarten & Datan 1973; Neugarten, Moore & Loew 1965); according to Elder & Rockwell (1979), “there are cultural definitions of appropriate times for schooling, leaving home, marriage, and childbearing”. Individuals are believed to be aware of these norms, and are also “made cognizant” (Elder 1974) of being early or late in their transitions by others.

The transition to adulthood is the process through which adolescents, and the cohort to which they belong, come to adopt adult roles, moving from a state of dependency and paternalistic subordination to one of independence and relative autonomy. This transition is conceptualized as occurring through a number of separate sub-transitions or events (Shanahan 2000). These can be subdivided into “family transitions”: leaving one’s “household of origin”, establishing a “household of procreation”, marriage, and childbearing; and “non-family transitions”: leaving schooling (be it high school or college) and beginning full-time work (Rindfuss, Swicegood & Rosenfeld 1987). The attainment of adult status is of not contingent upon the completion of all of these transitions (Heinz & Kruger 2001). But scholars have established that the bulk of any birth cohort will indeed do so (Hogan & Astone 1986; Modell, Furstenberg & Hershberg 1976) and the empirical study of the life course tends to treat the completion of these events as not only indicative of adult status but as equivalent to the attainment of this status itself.

The sequencing of these events is also considered to be normatively regulated; the “socially prescribed” manner of making the transition to adulthood involves exiting from education, beginning a full-time job, getting married, and having children – in that order (Hogan 1978). The hypothesis that transitions that are “off-time” and sequences which are “out-of-order” (or “deviant”) will entail negative consequences for the individual over the short and long term has been the subject of a good deal of

Marini (1984) has incisively questioned the conceptual primacy of norms in this literature, and indeed in the most convincing theoretical renditions the negative consequences of “deviant” timing and sequencing are not explained through reference to formal or informal sanctioning. Hogan, for instance, argues that “the structures of social institutions are designed for compatibility” with the normal or expected order and timing of events. Compliance results in “maximal harmony” with one’s social context, whereas non-compliance order generates friction in one’s attempts to negotiate important institutions (Hogan 1978). For example, teen pregnancy – an example of a transition which is both “off-time” and “out of sequence” – increases the risk of poverty because the young mother has had a child prior to completing high school and beginning full-time work, and thus will not have the financial wherewithal to fully fulfill her maternal role without severe strain (Elder 1998; Furstenberg 1976).

The life course literature emphasizes that the transition to adulthood, and age-structuring generally, is both culturally variable and historically contingent (Buchman 1989; Kohli 1986; Mayer & Schoepflin 1989; Modell, Furstenberg & Hershberg 1976; Shanahan 2000). In the modern West, after trends toward compression and standardization (of the component sub-transitions) which reached their apex after World War II, the transition to adulthood has become more delayed, prolonged, and diversified, reflective of a general societal individualization involving the conscious planning of individual biographies (Beck 1992; Giddens 1991). In a series of papers, Arnett (2000, 2007a, 2007b) has proposed that a new life stage he terms “emerging adulthood” has developed in rich countries, made possible by lengthened educational participation, delayed marriage, and delayed fertility. This life stage is described as intervening between adolescence and young adulthood, and characterized by a diversity of experiences, a relative freedom from normative roles and expectations, and the gradual forging of individual adult identity in a highly individualistic manner.
The literature also acknowledges variance in the transition to adulthood, particularly by gender and class (Hogan & Astone 1986; Oesterle et al. 2010; Shanahan 2000). Furstenberg (2008) articulates a life course model of stratification in which class disadvantage begins prior to birth (e.g. differential access to prenatal care) and cumulates over childhood and adolescence. Individuals from different backgrounds thus reach the transition to adulthood with dramatically different sets of resources and orientations, impacting the form and character which the transition takes (Thomson, Henderson & Holland 2003). Arnett (2000) agrees that the form of emerging adulthood varies by class as a result of varying “opportunities for exploration”; though one could further suggest that the degree to which one has an “emerging adulthood” is itself class-graded. Additionally, there is some evidence that recent increases in inequality have led the transition to adulthood to become more varied and unequal over time (Booth, Crouter & Shanahan 1999).

*Schooling and the Transition to Adulthood*

The expansion of schooling plays a prominent role in the transformation of the transition to adulthood. Compulsory schooling laws, along with the age-graded nature of education systems, were essential in imposing a standardized character on the early life course (Buchanan 1989). The expansion of discretionary (i.e., post-secondary) education in the 20th century is, by contrast, a source of diversity between the life courses of members of a cohort since some continue on in education while others exit (Fussel, Gauthier & Evans 2007). The timing of other events, such as full-time labor market entry, marriage, and childbearing, varies within cohorts by educational attainment (Oesterle et al. 2010; Raley, Kim & Daniels 2012), and the expansion of higher education has contributed to the rising average age at first marriage and first birth across cohorts. Increasing educational attainment also increases the diversity of event sequences during the transition to adulthood, since additional years of schooling increase one’s exposure to the risk of marriage, labor market entry, or childbirth prior to school leaving (Hogan 1978, 1981; Pallas 1993; Marini 1985).
As college enrollment has expanded, enrollment patterns have diversified (Bound, Lovenheim, & Turner 2012; Goldrick-Rab 2006; Pfeffer & Goldrick-Rab 2011). The increased prevalence of non-standard enrollment has complicated the relationship between school leaving and the transition to adulthood – both analytically and subjectively. The prevalence of multiple college enrollment spells makes it more difficult to identify the timing of the end of education with certitude, and the tendency of adult students to combine schooling with clearly “adult” statuses such as full-time employment and parenthood renders the traditional classification of the “student” role as pre-adult (Pallas 1993) increasingly untenable. Qualitative studies have shown that in the popular imagination enrollment in college does not contradict or even qualify one’s status as an adult (Pallas 2006).

The relationship between higher educational participation and the timing of marriage, childbirth, and labor market entry is complex. In aggregate, additional schooling tends to delay marriage and childbirth, but it is also true that early entry into marriage and parenthood can negatively impact educational attainment (Kim & Daniels 2012; Marini 1984; Rich & Kim 1999). Additionally, individuals who delay entry into or interrupt their enrollment in college get married or have children in the interim not infrequently; these occurrences can in turn push back their re-entry into schooling.

Combining college attendance with some other adult roles has been shown to lower the probability of completing a degree. For example, Roksa and Velez (2012) find that most of the negative effect of delayed entry on degree completion can be explained by the tendency of delayers to combine schooling with full-time work and parental responsibilities. Taniguchi and Kaufman (2005) also find that having small children lowers the odds of degree completion. Added responsibilities, and particularly full-time work and young children, can generate “role strain” for adult students (Deutsch & Schmertz 2011; Gigliotti & Huff 1995), and increase time-to-degree by necessitating part-time enrollment (Jacobs & Berkowitz-King 2002).
Such findings support the contentions of Hogan (1978) regarding the institutional mechanism through which off-time or out-of-sequence transitions result in negative outcomes. Institutions of higher education, from this perspective, operate according to the presumption that students can devote substantial time and effort towards course completion, and can regularly attend classes at various times throughout the day. These institutional requirements are simple for “traditional” students to navigate, since such students are primarily oriented towards the “student” role and are financially supported by others, but tricky to reconcile with the demands of adult roles. For students who have acquired adult statuses, colleges can appear to be “greedy institutions” (Coser 1974)\textsuperscript{43}.

**Sequences of Schooling**

Modern American higher education is characterized by a diversity of enrollment patterns. Rowan-Kenyon (2007) reports that nearly 20% of all students delay enrollment, and O’Toole, Stratton, and Wetzel (2003) estimated that half of students attend part-time at some point during their college careers. Recently, scholars have begun systematically exploring the diversity of enrollment patterns using cluster analysis\textsuperscript{44}. Crosta (2014) identifies six latent groups among community colleges students - full-time persisters, early leavers, early persistent switchers, mostly part-timers, early attachers, and later attachers – each of which exhibits a different enrollment profile. The most commonly observed groups were the full-time persisters and early leavers, who represent normatively successful students and quick withdrawers respectively, but these two groups only accounted for about half of all cases. Transfer to a four-year and credential completion was most common among groups who attended full-time fairly

\textsuperscript{43} Hogan notes that to the degree to which higher education has adjusted to accommodate diverse life-course trajectories such as those of adult students, it is by creating institutions “of a remedial nature” such as community colleges.

\textsuperscript{44} Much of this recently developing strain of research does not investigate enrollment patterns directly, but types of courses taken, reasons for enrollment, or measures of academic integration. See Bahr (2010) for a good review and example.
consistently in early semesters, but later attachers, who were relatively likely to attend part-time and to interrupt enrollment, also had relatively high rates of such outcomes.

However, research has established that non-standard pathways, though institutionally available and common, are hazardous; taking them substantially lowers one’s likelihood of degree completion. Those who delay enrollment are less likely to complete a degree, even after socioeconomic background and academic preparation are controlled (Attewell, Heil & Reisel 2012; Bozick & Deluca 2005; Niu & Tienda 2013; Roksa & Velez 2012). Negative impacts on completion also result from interrupted enrollment (DesJardins, Ahlburg & McCall 2006; Goldrick-Rab 2006) and part-time enrollment (Jacobs & King 2002; O’Toole, Stratton & Wetzel 2003; Taniguchi & Kaufman 2005). Since non-traditional modes of attendance are both common among students from disadvantaged backgrounds (Goldrick-Rab & Han 2011; Hearn 1992; Rowan-Kenyon 2007) and reduce educational attainment, they appear to be an increasingly powerful mechanism through which educational stratification is reproduced among college-goers (Milesi 2010).

What is not well understood is the relationship between non-standard attendance patterns and the broader transition to adulthood. Prior studies of educational sequences typically investigate a period beginning with first enrollment and lasting six years at most, which is insufficient for exploring enrollment over the entire transition to adulthood. Most also do not include data on how students’ employment and family statuses change over time. Alternatively, studies of the transition to adulthood typically include little data on educational transitions. To understand the relationship between schooling and the transition to adulthood, these must be considered simultaneously.

**Sequence Analysis**

*Sequence analysis* is not itself a method but a family of similar methods for solving related problems (Abbott 1990, 1995). A *sequence*, in this context, is an ordered series of indicators which
represent categories or “states” which a unit of analysis can potentially occupy. The ordering is typically temporal; the sequence thus sketches the movement of a unit through a series of particular states or statuses sequentially a time period. Sequence analysis is thus an approach to studying longitudinal data, but unlike better-known methods of longitudinal analysis, such as event history modeling, it does not model transitions between states as a function of a set of independent variables. Instead, it is first and foremost descriptive in nature, taking the sequence of states itself as its object and comparing sequences to each other. The data-generating model is not presumed to be stochastic; in remaining at the level of pattern identification it remains agnostic as to the underlying data-generating mechanism (Aisenbrey & Fasang 2010; Brzinsky-Fay & Kohler 2010).

The most common method of analyzing sequences is known as optimal matching (OM). Initially developed to solve problems in genetics and computer science, OM was imported into the social sciences by Andrew Abbott in a series of empirical analyses and methodological papers (Abbott 1990, 1992; Abbott & Forest 1986; Abbott & Hrycak 1990). OM is a method for quantifying the relative similarity or dissimilarity of sequences in terms of the number of transformations required to render the sequences identical. The result of OM is a distance matrix which can then be analyzed via cluster analysis, multidimensional scaling, or tree analysis.

OM has been most commonly used to analyze career trajectories (e.g. Halpin & Chan 1998; Scherer 2001), but has recently been adopted by scholars investigating the life course. For instance, Billari and Piccaretta (2005) analyzed the timing and sequencing of events in the transition to adulthood of cohorts of Italian youth (see also Billari 2001), and Aasave, Billari, and Piccaretta (2007) employed optimal matching to explore the family and school-to-labor-market transitions of British females. An overview of the use of sequence analysis in life course studies is found in Aisenbrey and Fasang (2010),

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45 In the social sciences, sequence analysis methods have been employed primarily to analyze data in which states occur sequentially in time, but there is no necessary restriction to this context. The methods, for instance, were initially devised to analyze genetic sequences.
and broader reviews of the empirical literature employing sequence methods are found in Abbott (1995) and Abbott and Tsay (2000).

**Data and Methods**

*Data*

Data for this chapter are drawn from the National Longitudinal Survey of Youth, 1979 cohort (NLSY79). Funded and directed by the U.S. Bureau of Labor Statistics (BLS), the NLSY79 is a representative sample of individuals born between 1957 and 1964 and living in the United States in 1979. Initial interviews took place in 1979; subjects were re-interviewed annually from 1980 until 1994 and biennially since. Sample attrition has been strikingly low for a survey of this length and sample size. In 2010, the most recent year for which data processing has been completed, 75.9% of eligible subjects were able to be interviewed, and 52.3% had completed all twenty-four interviews to date. Weights to correct for initial differential probability of selection and for subsequent non-response bias are provided for each wave of the survey by the BLS.

The NLSY79 is ideal for studying patterns of schooling, work, and family transitions because of its representative nature and its duration. Most studies of the transition to adulthood rely on either retrospective surveys of older adults or on shorter longitudinal studies of youth. The former require respondents to recall events over their entire life course and are thus subject to the inaccuracies and vagaries of long-term memory. Studies which focus on educational cohorts, such as the National Educational Longitudinal Survey of 1988 (NELS-88) or the High School and Beyond Survey (HS&B), tend only to follow subjects until their mid- or late-20s, which is insufficient for longer-term college enrollment patterns. Even the latest of the National Longitudinal Surveys, the NLSY 1997 cohort, is inadequate because its oldest members were only 32 years of age in the last year for which data are available (2012). The NLSY79, meanwhile, has representative cohort data for individuals from their mid-
teens through their early 50s, and thus represents completed cohort data for the transition to adulthood.\footnote{A fuller description of the NLSY79 appears in Appendix 2. For detailed information about data collection and processing, see Center for Human Resource Research (2001). Up to date statistics on retention are available through the NLSY79 website, \url{https://www.nlsinfo.org/content/cohorts/nlsy79}.}

One drawback of the NLSY79 is that data on labor market transitions is available for the oldest survey respondents from their early 20s onward. In this chapter, therefore, I make use only of respondents who were younger than 18 at first interview – those born after 1960. Additionally, I exclude respondents who dropped out of the study prior to their 35\textsuperscript{th} birthday. The resultant sample size is 4,766, and 2,528 for analyses only of those who ever enrolled in college.

Creating Sequences

I drew upon both yearly responses and retrospective questions in order to identify the timing of collegiate enrollments, bachelor’s degree completion, labor market participation, marital events, and childbirths. Statuses for college enrollment, work, marriage and parenthood are determined on a year-to-year basis between the ages of 18 and 39.\footnote{This window is somewhat longer than is standard for transition to adulthood research. But since my focus is on non-traditional schooling, setting a cut-off any earlier in life would be counterproductive. It also permits a more comprehensive description of patterns entry in marriage and parenthood than would an age-horizon of 30 or 35.} For each individual, I therefore create four separate arrays of 22 yearly statuses.

I code college enrollment and completion together as one status-set. In this array, three statuses are available: not enrolled, no bachelor’s degree (N); enrolled, no bachelor’s degree (E), and bachelor’s degree obtained (B). Though individuals can move from enrollment to non-enrollment during a year, I code a case as enrolled if they enrolled in college at all during that particular year, regardless of enrollment length or intensity. Attention is restricted to enrollment which has the capacity for progress towards the bachelor’s degree specifically; post-baccalaureate enrollment is not examined.
Labor market status is defined through three states: not working (U), working part-time (P), and working full-time (F). These statuses are determined on a yearly basis, by averaging labor market participation over the course of the year. To do so I tap weekly work-hour arrays, and taking the average for the year in question. I code as “not working” only cases whose average work hours are actually equal to 0. Those who worked on average more than 0 but less than 20 hours per week are coded as “part-time”, and working 20 or more hours weekly is coded for this analysis as “full-time”. This rather liberal definition of full-time status is chosen to capture individuals who generally work full-time but experienced a substantial stint of unemployment. I code marital status as either “never married” (U), “currently married” (M), and “post-marital” (P). This final category groups together individuals who exited marriage due to divorce, separation, or death of a spouse. Parenthood is coded in terms of parities: no children (0), one child (1), and two or more (2).

Sequences consist of strings of statuses for individuals over each year of their lives from age 18-39. For instance, the marital sequence:


represents the marital career of an individual who married for the first time at 24, divorced at 28, remarried at 32, and remained in this union through age 39. An example of a schooling sequence for a “traditional” college student would appear as:

E-E-E-E-B-B-B-B-B-B-B-B-B-B-B-B-B

Whereas a non-traditional student may have a sequence such as:

N-N-E-E-N-N-N-E-E-N-E-B-B-B-B-B-B-B-B-B-B-B

---

48 Incidence of widowhood and separation in the data is relatively low, and creating separate categories would clutter the analysis to little benefit.
Because each sequence category has three statuses and is 22 characters in length, there are $3^{22}$ potential sequences for each category$^{49}$ – far more than the number of cases in the data. Most of these sequences never appear. In the college-only dataset, only 1,049 distinct sequences educational sequences appear (in a dataset of 2,528). Similarly, only 1,766 distinct employment sequences appear in the full data; comparable numbers for marital and parental sequences are 653 and 229 for children.

In a final analysis I combine work, marriage, and parental states together and create a sequence out of these combined statuses. Each year of this sequence is a state which is the combination of three sub-states. For instance, the state PU0 would signify an individual in a particular year who was working part-time, not yet married, and without children, and the status FM2 signifies an individual who is working full-time, is married and has two children. Within each year, there are $3^3=27$ possible combined statuses, and therefore $27^{22}$ possible sequences; 4633 distinct sequences appear in the full data.

Methods for Analyzing Sequence Data

The “metric” approach to sequence analysis (Abbot 1995) involves analyzing the resemblance between sequence pairs by calculating the “distance” separating them. In practice, this involves calculating the cost of transforming one sequence into another (the transformation cost). If two sequences are already similar, the costs will be quite low, and costs rise as sequences become more and more disparate.

Sequences are altered in one of three ways. One can replace one element with another, insert an element, or delete an element; the latter two possibilities are collectively labeled “indels” (for “insertions-deletions”). Determining how much cost ought to result from indels and replacements has

$^{49}$ In actuality, the number of possible sequences is lower for college enrollment, marriage, and parenthood, because some transitions are irreversible. One cannot exit out of having earned a bachelor’s degree, for instance, nor can one revert from two to zero children.
been a matter of substantial controversy in the sequence literature (Gauthier, et al. 2009; Levene 2000), and the matter boils down to two questions. First, how much should replacements cost? Different statuses are clearly not equally similar conceptually; having a bachelor’s degree is more dissimilar to not being enrolled than to being enrolled, for example. While in early papers it was common to either assign all replacements a unit cost, or to set costs according to theory or intuition, a consensus has emerged in favor of setting costs equal to the empirical probability of particular transitions in the data (Aasave, Billari & Piccarreta 2007). In this case, to determine the replacement cost between two states \(a\) and \(b\), one first calculates the ratio or the probability of seeing \(b\) following \(a\) to the probability of seeing \(a\), and the ratio of the probability of \(a\) following \(b\) to the probability of \(b\). The replacement cost then becomes two minus the sum of these ratios. I employ this practice in all analyses.

Second, how much ought indels to cost relative to replacements? If indel costs are set too low, they will be relied upon too heavily, and if set too high they will never be chosen. Indels are more frequently tapped in data where sequences are of differing lengths. If, as is the case in my data, all sequences are of equal length, each insertion will necessitate a deletion and vice versa. I opt to set indel costs equal to 1, which is just short of one-half the maximum replacement cost. As a result, indels will be used rarely, in keeping with the advice of a number of researchers (e.g. Lesnard 2006; MacIndoe & Abbott 2004).

Once indel and replacement costs are set, researchers must select an algorithm for identifying the most efficient, least costly way of transforming one sequence into another. For the most part, I utilize an OM algorithm that calculates distances between sequences using indel and substitution costs which are constant through the full sequence. Detailed descriptions of this algorithm can be found in Abbott & Forest (1986) and in the appendix to Abbott & Hryack (1990). For a final analysis, I make use of dynamic Hamming distance (Lesnard 2008), an algorithm that does not permit indels and which calculates time-varying transformation costs.
Sequence analysis calculates distances between each pair of sequences in the data, resulting in an \( N \times N \) distance matrix. Typically, this matrix is subjected to some method for analyzing distances, such as cluster analysis, permitting the identification of latent subgroups of sequence patterns. But other methods have recently been developed which enable additional researchers to answer other questions. For instance, Studer et al. (2011), following Zapala and Schork (2006), have developed an ANOVA-like method for analyzing between-sequence variance as a function of categorical independent variables, the measurement of within-category distances called disrepencies. This method also produces a pseudo-\( R^2 \) indicating the proportion of between-sequence distances “explained” by a covariate.

Additionally, rather than calculating the distances between all sequence pairs, one can specify one or more “reference sequences” and calculate from these distances to each case. One thus generates for each case a variable representing distance to the reference sequence which can be modeled using regression. Reference sequences can be theoretically derived, or can be derived empirically. In one analysis that follows, I identify the most representative sequence among individuals with given educational trajectories. I designate as representative sequences the “medoid” of a given sequence-set. This medoid sequence may or may not belong to the empirical sequence space; it is the real or hypothetical sequence which minimizes the sum of squared distances to all other sequences in the set. I implement all sequence analyses in R using the “TraMineR” package (Gabadinho et al. 2014).

**Analytic Strategy**

In what follows, I proceed in stages. First, I use OM to explore patterns of college attendance and attainment among individuals who ever enrolled in college, and identify latent sequence patterns using hierarchical clustering\(^{50}\). Once these attendance subgroups are identified, I examine how

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\(^{50}\) Hierarchical clustering joins together first cases, then already-aggregated clusters of cases, according to the distance between them. Clusters which are separated by less distance are joined first, and more dissimilar clusters later.
sequences of work transitions, marriage, and parenthood vary across them. I first do this graphically, and then use *multichannel optimal matching* to calculate distances between individuals in terms of these three other sequences. Next, I employ the ANOVA-like technique described above to determine the variance in non-school transitions between and school attendance-pattern subgroups, revealing which schooling patterns have a structuring, standardizing effect on the transition to adulthood overall.

Finally, I identify “representative sequences” - medoid sequences – of adulthood transitions (employment, marriage, and childbearing grouped together) for traditional college completers and for those who did not attend college. Separate medoid sequences are designated for males and females in recognition of gender-based differences in transition timing and sequencing. I then calculate the distance from all cases to the medoid collegiate sequences, and use these distances as dependent variables in a regression analysis investigating background factors which predict variance from statistically “representative” trajectories into adulthood.

**Independent Variables**

In the regression analysis, I tap two “background” variables: *race* and *socioeconomic status*. Race is defined through separate dummy variables for Blacks and Latinos, with White as the reference category. Socioeconomic status is a summated rating scale combining categories of parental education (less than high school, high school, some college, and completed BA), quintiles of family income at first survey, and categories of parental occupational prestige (see Appendix 2). These three measures combine in a scale with a reliability coefficient of $\alpha=.67$ for females and $\alpha=.68$ for males.

I also make use of four variables which measure aspects of pre-college schooling. *High school grades* is an average of five to twelve grades gathered from the transcript survey; the number of classes

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51 Asians are not separately identified in this analysis; they are included in the reference category. The reason for this is that there are not very many Asians (a few hundred) in the NLSY79 data. This in turn reflects the small representation of Asians in the population for which the data is representative.
for which grades was reported varies by student. *High school disadvantage* describes the composition of the student body at an individual’s high school, and is a composite of the racial makeup of the high school (percent Black or Latino), the socioeconomic makeup (percent economically disadvantaged), and the school dropout rate. It has a reliability in the full NLSY79 dataset of $\alpha=.61$. *Best friend’s college plans*, a proxy for peer influence, is coded as 1 if the respondent’s best friend planned to attend college in 1979 and 0 otherwise. Finally, I include an indicator variable denoting if the respondent *ever dropped out* of high school.

**Results**

*College Enrollment and Attainment Sequences*

I begin by analyzing enrollment among students who ever attended college. Prior to doing so, though, I first derive replacement costs from the empirical probabilities of state transitions in the data. These probabilities, and their associated costs, are given in Table 1. Some probabilities are structurally determined. By definition, once one has earned a bachelor’s degree, one cannot transition to any other state (thus, transition probabilities from B->N and B->E are zero). Similarly, the transition from non-enrollment directly to bachelor’s attainment rarely occurs. Others are of empirical interest. Individuals who were not enrolled have, overall, a 10% chance of transitioning to enrollment, and those who were enrolled in college were, in these data, more likely to stop out of education (32%) than to complete a degree (7%). The right panel of Table 3.1 converts these transition probabilities into replacement costs.

Table 3.1. Transition probabilities and replacement costs between college enrollment states

<table>
<thead>
<tr>
<th></th>
<th>Transition Probabilities</th>
<th>Cost Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-N</td>
<td>-E</td>
</tr>
<tr>
<td>N -&gt;</td>
<td>0.89</td>
<td>0.10</td>
</tr>
<tr>
<td>E-&gt;</td>
<td>0.32</td>
<td>0.60</td>
</tr>
<tr>
<td>B-&gt;</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: NLSY79

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52 Non-college respondents are excluded at this stage because they have identical enrollment sequences and because, as by far the largest group in the data - 47% of cases – they would overwhelm the OM analysis if included.
Optimal matching was performed on this set of 2528 sequences, producing a distance matrix which I analyzed using hierarchical clustering\textsuperscript{53}. As Figure 3.1 displays, four fairly distinct clusters emerged, which I will call \textit{marginal college-goers}, \textit{rapid completers}, \textit{life-long students}, and \textit{delayed completers}. Enrollment patterns for these four clusters are depicted in Figures 3.2 and 3.3. Figure 3.2 displays stacked individual state sequences for all members of each cluster, and Figure 3.3 aggregates state sequences to show the distribution of states by age within each cluster\textsuperscript{54}.

Figure 3.1. Dendrogram depicting the hierarchical clustering of distances between college enrollment and attainment sequences. The number of cases at the point at which clusters are joined is given by the Y axis.

\textsuperscript{53} In hierarchical clustering, two questions are methodologically primary. First, a method of calculating distances must be chosen, and I use Ward distances, which join together clusters which minimize the resulting increase in total within-cluster difference. Second, a number of clusters must be chosen. I chose the number of clusters which preceded a rapid increase in within-cluster distance. For a good recent text on clustering, see Kaufman & Rouseeuw (2009). Clustering was implemented using the “agnes” algorithm, part of the “cluster” package in R.

\textsuperscript{54} Fig. 3.2 is an example of a \textit{sequence index plot}. In such plots, each line represents an individual case’s sequence over time. Sections of the sequence are color-coded to indicate which state the case is in during a given period. Fig. 3.3 is a \textit{state distribution plot}. Here, for a given period, the proportion of the group in a given state is color-coded and gathered together, revealing how the group as a whole moves among states over time.
Marginal college-goers are numerically dominant, accounting for 45% of all ever-enrolled individuals. As the name suggests, they are individuals who enroll infrequently and for very short periods. Their enrollment is densest in early adulthood - about 40% of this group was enrolled at age 19 - and declines steadily at older ages. That this group is the most numerous speaks to the experience of college for a large portion of those who attend: their experience consists of one or two brief enrollment spells, sometimes after a substantial initial delay, which does not result in degree completion.

Rapid completers, who make up 35% of college-goers, cleave closest to normative patterns of successful college attendance, attending at high rates in early years and rapidly converting their attendance into degree attainment. But there are two interesting subtleties here. First, though college completion is universal in this group, it is not universal until about age 29, indicating that even among “successful college students”, degree attainment by age 24 of 25 is not a given. Secondly, this group’s age-specific attendance rates never top 80%, implying that delayed and interrupted enrollment are common even among those who make steady progress towards a degree.

Lifelong students are individuals who attend at modest rates beginning in their late teens and continue to attend at such rates through their early 30s. Individuals in this group clearly delay and interrupt their enrollment, but return to school with regularity. Degree completion in this group is extremely rare, however, despite relatively consistent attendance. They account for 12% of all college-goers.
The enrollment pattern of delayed completers resembles that of lifelong students until about age 30 – halting but relatively common, with no degree attainment. After age 30, the two groups diverge, as delayed completers convert their uneven attendance into degree attainment which becomes universal by their late 30s. They account for the remaining 7% of subjects.
Figure 3.3. State distribution plot of sequences of college enrollment and completion.

The lifelong students and the late completers are, then, positive and negative images of the adult student. On one side are individuals who return to college over and over, but are never able to complete a degree. On the other are those who diligently turn attendance into completion over a long period of intermittent enrollment. It is important to note, though, that both groups are dwarfed in numerical terms by the marginal college-goers.
Patterns of Enrollment and Transitions to Employment, Marriage, and Parenthood

Next, I consider how the transitions to employment, marriage, and parenthood differ for the latent enrollment groups identified above as well as for individuals who did not attend college. I remain here at the level of description, because since we are examining full contemporaneous sequences the direction of causality cannot be identified. Individuals, that is, might delay schooling because they have a child, or they might have a child early in part because they are not enrolled in college and have already transitioned to full-time work.

Employment sequences, depicted in Fig. 3.4, reveal strikingly high employment rates – upwards of 80% - and the heavy use of part-time employment at young ages. This is reflective of historically high rates of youth employment in the early-to-mid 1980s, when these cohorts were 18-23 (Morisi 2010). The distinctive group here is the rapid completers. For this group, part-time employment is utilized much more heavily – over 80% of this group is employed part-time at younger ages, and this proportion declines only modestly through age 21 before rapidly plummeting to less than 10% by the late 20s. Rapid completers were less likely, in early years, to either work full time or to not work at all, than individuals in any other group. Subsequent to age 23, this group has the highest density of full-time employment, likely reflecting the better employment prospects of those with college credentials. But it is clear that this advantage in employment did not begin at age 23, but existed as early as 18.
Members of other groups have employment trajectories which are, on the whole, quite similar to each other. Not working is most common in all years among non-college goers. Further analysis (not shown) reveals that this difference is mostly due to a much lower rate of employment among non-college females than among females of other groups. Male differences are less pronounced, especially at earlier ages, though non-college males are less likely to be working full-time after age 24. In contrast to other groups, lifelong students seem to have a slight downturn in overall employment from age 18-24. But in general, in terms of employment patterns, the intermediate groups resemble non-college-goers far more than they do the rapid completers.
I move, in Figure 3.5, to patterns of entry into marriage. As was the case with employment sequences, the rapid completers are distinctive. This group doesn’t enter into first marriage at a rate of even 10% until age 22, when all other groups’ rates are well over 30%. Rapid completers’ entry into first marriage is steady after this point, reaches parity with other groups by age 31, and thereafter eclipses them. By age 39, only 16% of the rapid completers had never married, compared with 25% of non-college individuals, and between 18-20% of the other college-attending groups. This group is also distinctive in its relative rarity of marital dissolution. The proportion of rapid completers who are formerly married never climbs above 11% even at age 39, at which point this rate for other groups is over 20%.

Marriage sequences of rapid completers contrast most sharply with those of the non-college group, both in terms of rapidity of entry into marriage and in terms of its dissolution. The other groups fall in between these two, but in general they all are more similar to non-enrollers. Consider entry into marriage. At age 18, more than 10% of non-enrollers were already married, compared with 1% of the rapid completers, 7% of the marginal college-goers, 4% of the lifelong students, and 7% of the delayed completers. By age 25, the ever-married portion had risen to 54% among non-enrollers, 53% among lifelong students and delayed enrollers, and 58% among marginal college-goers, while not yet reaching 40% among rapid completers. Consider also marital dissolution. At age 30, the percent formerly married was between 16 and 19% for all groups except the rapid completers, who were only 7% formerly married. However, one other interesting pattern should be noted: by their mid-30s, delayed completers appear to move to a position further away from the other groups and closer to the rapid completers.
Finally, Figure 3.6 displays patterns of entry into parenthood. Early parenthood is most common among the non-college group, approximately 15% of which had a child by 18. This number rises to over 30% by age 20 and to just below 60% by age 25. Among rapid completers, by contrast, only 1% of had a child at 18, rising to only 3% at age 20 and 15% at 25. Early childbearing for the other college-going groups falls between these extremes. At 18, 9% of marginal college-goers, 4% of lifelong students, and 6% of delayed completers were already parents. By 20, these percentages increase to 22%, 17%, and 17% respectively. By 25, 50% of marginal college-goers, 44% of lifelong students, and 39% of delayed
completers had children. At every age, individuals who never attended college were more likely to have had children, and were more likely to have had at least two. Indeed, by age 39, 82% of non-college goers had children, and 64% had at least two. For rapid completers, the comparable numbers are 72% and 56%; for marginal college-goers 81% and 62%; for lifelong students 78% and 56%; and for delayed completers 69% and 47%.

Figure 3.6. State distribution plot of child parity sequences, by education-pattern clusters

Taking the graphical depictions of these three transitions together leads to the impression of there being two norms for the transition to adulthood. The first is a pattern of early transition into full-
time work, marriage and parenthood, and is most distinct among those who do not attend college. The second is a pattern in which all of these transitions are delayed for a number of years, and is held to strongly by the rapid completers. This speaks to the massive import of educational institutions in structuring the life-course generally, and the degree to which the full delay of adult roles is associated with rapid completion of college. Non-traditional students, meanwhile, strike patterns between these poles; their intermediate position in these other transitions mirrors their intermediate position in terms of college attendance.

Diversity in Life Course Transitions

The previous analysis indicated some general patterns of in the transitions to employment, marriage, and parenthood, but it neglected the matter of heterogeneity within groups. Though research has established the diversity in life course transitions (Rindfuss, Swicegood, & Rosenfeld 1987), which groups tend to have more or less diversity is not well known. I turn now to an investigation of heterogeneity in the transition to adulthood within latent enrollment groups.

I employ multichannel optimal matching to analyze the employment, marriage, and childbearing sequences simultaneously. As before, I derive replacement costs in a data-driven manner, and report both empirical transition probabilities and associated costs in Table 3.2. The employment transition matrix, in the top panel, exhibits the most instability, particularly with regard to part-time employment: only 44% of part-timers remain so in the following year, while 39% move to full-time employment and 17% do not work at all. Nearly three-quarters of those not working remain not working, and the remainder tend to move to part-time employment rather than full-time employment. The next panel reveals that 95% of those married in a given year remain married, but 5% of individuals see their marriages end. Remarriage is more likely than dissolution, though: 10% of those who are ‘formerly married’ re-enter marriage in the following year. For childbirth transitions, in the final panel, what is
most interesting is the much higher probability of moving from parity=1 to parity=2 (0.13) compared to the probability of first birth in a given year (0.07).

Table 3.2: Transition probabilities and replacement costs in employment, marriage, and childbearing sequences.

<table>
<thead>
<tr>
<th>Employment Transitions</th>
<th>Employment Transitions</th>
<th>Employment Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>-&gt;U</td>
<td>-&gt;P</td>
<td>-&gt;F</td>
</tr>
<tr>
<td>U-&gt;</td>
<td>0.72</td>
<td>0.19</td>
</tr>
<tr>
<td>P-&gt;</td>
<td>0.17</td>
<td>0.44</td>
</tr>
<tr>
<td>F-&gt;</td>
<td>0.02</td>
<td>0.08</td>
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</table>

<table>
<thead>
<tr>
<th>Marital Transitions</th>
<th>Marital Transitions</th>
<th>Marital Transitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>-&gt;U</td>
<td>-&gt;M</td>
<td>-&gt;P</td>
</tr>
<tr>
<td>U-&gt;</td>
<td>0.93</td>
<td>0.07</td>
</tr>
<tr>
<td>M-&gt;</td>
<td>0.00</td>
<td>0.95</td>
</tr>
<tr>
<td>P-&gt;</td>
<td>0.00</td>
<td>0.10</td>
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</table>

<table>
<thead>
<tr>
<th>Parenthood Transitions</th>
<th>Parenthood Transitions</th>
<th>Parenthood Transitions</th>
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<tr>
<td>-&gt;0</td>
<td>-&gt;1</td>
<td>-&gt;2</td>
</tr>
<tr>
<td>0-&gt;</td>
<td>0.93</td>
<td>0.07</td>
</tr>
<tr>
<td>1-&gt;</td>
<td>0.00</td>
<td>0.87</td>
</tr>
<tr>
<td>2-&gt;</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: NLSY79

Multichannel optimal matching, as before, generates a distance matrix. Here, rather than analyzing this matrix using clustering, I employ an ANOVA-like method developed by Studer and colleagues (2011). This method involves first locating a central sequence or “medoid” for sets of sequences which represent categories of an independent variable, and calculating mean distances to these medoids (called discrepancies). This permits the calculation of the proportion of between-sequence distances which can be explained by these categorical independent variables, and generates a pseudo-R² equal to the ratio of the sum of squared distances between groups to the total sum of squared distances; the statistical significance of this statistic is determined through permutation methods. Finally, we can determine whether within-group distance is significantly different between groups using a variant of Levene’s test (statistical significance also determined through permutation).
Table 3.3. Analysis of within-group variance in employment, marriage, and parenthood transitions

<table>
<thead>
<tr>
<th>Within-group discrepancies</th>
<th>Mean Distance from group medoid (discrepancy)</th>
<th>Standard deviation of distance</th>
<th>Median Distance to group medoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Educational Cluster</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No college</td>
<td>32.24</td>
<td>7.62</td>
<td>31.79</td>
</tr>
<tr>
<td>Marginal College-goers</td>
<td>30.31</td>
<td>8.17</td>
<td>29.87</td>
</tr>
<tr>
<td>Rapid Completers</td>
<td>22.7</td>
<td>8.56</td>
<td>21.11</td>
</tr>
<tr>
<td>Lifelong Students</td>
<td>30.37</td>
<td>7.47</td>
<td>29.26</td>
</tr>
<tr>
<td>Delayed Completers</td>
<td>28.91</td>
<td>8.42</td>
<td>27.01</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>28.21</td>
<td>8.21</td>
<td>27.64</td>
</tr>
<tr>
<td>Females</td>
<td>32.13</td>
<td>8.88</td>
<td>31.24</td>
</tr>
</tbody>
</table>

Analysis of within- and between-group distances

<table>
<thead>
<tr>
<th></th>
<th>Pseudo F</th>
<th>Psuedo-R²</th>
<th>Levene’s L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Cluster</td>
<td>31.4***</td>
<td>.0257***</td>
<td>236.73***</td>
</tr>
<tr>
<td>Gender</td>
<td>63.93***</td>
<td>.0132***</td>
<td>273.38***</td>
</tr>
</tbody>
</table>

Source: NLSY79

The results appear in Table 3.3. Among educational groups, there is the greatest variability in the transition to adulthood not among non-traditional college-goers, but among those who did not attend college. By far the least variability occurs among the life-courses of the traditional completers. Marginal college-goers, lifelong students, and delayed completers display middling degrees of variability, but are more similar to that of non-attenders. This finding suggests that prolonged, high-intensity educational participation serves to standardize the transition to adulthood. In total, educational clustering explains only about 2.5% of total between-individual distances (p<.001), and observed differences in within-group variability are also statistically significant at p<.001.

For contrast, I also examined the variance in transitions to adulthood for males and females. It appears that, in terms of marriage, child-bearing, and employment, females have more diverse transitions than males. The difference in mean distances to respective group centers is not large, but it
is statistically significant at p<.001. Gender explains only a little over 1% of between individual variance – less than that explained by educational enrollment cluster.

Representative Sequences in the Transition to Adulthood

Next, I establish representative patterns of the simultaneous transition to employment, marriage, and childbearing to investigate how such sequences vary by higher educational participation and gender. I generate representative sequences for four subgroups: non-college females, non-college males, females who complete college before age 25, and males who complete college before 25. To do so, I first I amalgamate employment, marriage, and parental sequences into a single sequence object consisting of three elements per person-year. Next, I find the medoid for each of the four designated subgroups.

The four resulting representative sequences appear in Table 3.4. The representative sequence of non-college women involves the highest number of transitions between states, and this is because of shifting employment status. In this sequence, the transition to full-time work occurs quite young, but childbearing years (25-33) are marked by shifts out of full-time work to part-time work and non-employment. No other representative sequence involves a transition out of full-time employment after entering it. The non-college female sequence also involves the earliest transitions to marriage and parenthood – at ages 23 and 25 respectively.

The representative sequences of collegiate females and males are remarkably similar, involving delayed entry into full-time work (at ages 23 and 22 respectively), marriage (ages 28 and 29) and parenthood (age 31). These results suggest two things of importance. First, at least for this age-cohort, one’s educational trajectory appears to be far more salient than gender in determining the form of the transition to adulthood. Second, gender differences are pronounced only among non-college individuals.
Table 3.4. Representative sequences for subgroups defined by college attendance and gender

<table>
<thead>
<tr>
<th>Age</th>
<th>Non-college females</th>
<th>Non-college males</th>
<th>Early completion females</th>
<th>Early completion males</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>PU0</td>
<td>PU0</td>
<td>PU0</td>
<td>PU0</td>
</tr>
<tr>
<td>19</td>
<td>FU0</td>
<td>PU0</td>
<td>PU0</td>
<td>PU0</td>
</tr>
<tr>
<td>20</td>
<td>FU0</td>
<td>FU0</td>
<td>PU0</td>
<td>PU0</td>
</tr>
<tr>
<td>21</td>
<td>FU0</td>
<td>FU0</td>
<td>PU0</td>
<td>PU0</td>
</tr>
<tr>
<td>22</td>
<td>FU0</td>
<td>FU0</td>
<td>PU0</td>
<td>FU0</td>
</tr>
<tr>
<td>23</td>
<td>FM0</td>
<td>FU0</td>
<td>FU0</td>
<td>FU0</td>
</tr>
<tr>
<td>24</td>
<td>FM0</td>
<td>FU0</td>
<td>FU0</td>
<td>FU0</td>
</tr>
<tr>
<td>25</td>
<td>PM1</td>
<td>FU0</td>
<td>FU0</td>
<td>FU0</td>
</tr>
<tr>
<td>26</td>
<td>PM1</td>
<td>FU0</td>
<td>FU0</td>
<td>FU0</td>
</tr>
<tr>
<td>27</td>
<td>UM1</td>
<td>FM0</td>
<td>FU0</td>
<td>FU0</td>
</tr>
<tr>
<td>28</td>
<td>PM2</td>
<td>FM0</td>
<td>FU0</td>
<td>FM0</td>
</tr>
<tr>
<td>29</td>
<td>UM2</td>
<td>FM0</td>
<td>FM0</td>
<td>FM0</td>
</tr>
<tr>
<td>30</td>
<td>PM2</td>
<td>FM1</td>
<td>FM0</td>
<td>FM0</td>
</tr>
<tr>
<td>31</td>
<td>FM2</td>
<td>FM1</td>
<td>FM0</td>
<td>FM0</td>
</tr>
<tr>
<td>32</td>
<td>PM2</td>
<td>FM1</td>
<td>FM1</td>
<td>FM1</td>
</tr>
<tr>
<td>33</td>
<td>FM2</td>
<td>FM2</td>
<td>FM1</td>
<td>FM1</td>
</tr>
<tr>
<td>34</td>
<td>FM2</td>
<td>FM2</td>
<td>FM1</td>
<td>FM1</td>
</tr>
<tr>
<td>35</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
</tr>
<tr>
<td>36</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
</tr>
<tr>
<td>37</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
</tr>
<tr>
<td>38</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
</tr>
<tr>
<td>39</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
<td>FM2</td>
</tr>
</tbody>
</table>

Source: NLSY79

**Predicting Distance from the Representative College Sequences**

Having identified these representative sequences, I find the distance between cases and the representative collegiate sequence of each gender. For this analysis, I permit transition costs to vary by age by using *dynamic hamming distance* rather than OM. For each case, I thus produce a distance to the representative college sequence.

Mean distances to representative sequences by cluster is given in Table 3.5. For females, mean distance from the collegiate sequence is lowest for the rapid completers, followed at some remove by the delayed completers, lifelong students, and marginal college-goers, and largest among the non-college group. Among the males, the pattern is quite similar to among females. Rapid completers
exhibit the smallest average distance to the representative sequence, followed in order by the delayed completers, lifelong students, marginal college-goers, and non-college individuals.

Table 3.5. Mean distance to representative sequences, by enrollment cluster. Standard errors in parentheses.

<table>
<thead>
<tr>
<th>Representative Sequence</th>
<th>No College</th>
<th>Marginal College-goers</th>
<th>Rapid Completers</th>
<th>Lifelong Students</th>
<th>Delayed Completers</th>
</tr>
</thead>
<tbody>
<tr>
<td>College (female)</td>
<td>73.98</td>
<td>68.64</td>
<td>53.42</td>
<td>67.04</td>
<td>64.21</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.52)</td>
<td>(0.71)</td>
<td>(0.87)</td>
<td>(1.36)</td>
</tr>
<tr>
<td>College (male)</td>
<td>65.33</td>
<td>61.37</td>
<td>49.36</td>
<td>62.16</td>
<td>58.65</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.65)</td>
<td>(0.73)</td>
<td>(1.28)</td>
<td>(1.58)</td>
</tr>
</tbody>
</table>

Source: NLSY79

Finally, I utilize the distance measures as dependent variables in a set of nested OLS regressions. Males and females are again analyzed separately, as their outcome variables are different. The nested regressions include, first, measures of race and socioeconomic status, and then include variables pertaining to high school disadvantage, performance, peer influence, and dropout. These variables are all measured prior to the transition to adulthood, so the direction of hypothetical causality is clear. Finally, I include a set of dummies indicating the individual’s higher education sequence cluster. Since these variables represent attendance patterns contemporaneous with the dependent variables, their coefficients must be read in solely associational terms. I have Z-standardized distances to render them more readily interpretable. Standard errors are calculated using bootstrapping (1000 replications).

In Table 3.6, models 1 through 3 present results for distance to the representative collegiate sequence for females. African-Americans have transitions more disparate from the college pattern than whites, but controlling for SES, the opposite is true for Latinos. Socioeconomic status is inversely correlated with distance, implying that those from wealthier backgrounds have transitions to adulthood more in keeping with a standard collegiate life script. This coefficient is substantially reduced when the
high school variables are introduced. Higher high school grades and a friend with college plans predict less distance from the college sequence, and high school disadvantage and dropout predict more distance. Rapid completers are quite a bit closer than the non-college reference group to the college pattern – most of a standard deviation in distance closer, net of background factors. Coefficients for other enrollment clusters are also negative and statistically significant.

Table 3.6. Regressions predicting distance to representative sequence

<table>
<thead>
<tr>
<th></th>
<th>Females (1)</th>
<th>Females (2)</th>
<th>Females (3)</th>
<th>Females (4)</th>
<th>Males (5)</th>
<th>Males (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino¹</td>
<td>-0.0379</td>
<td>-0.0925*</td>
<td>-0.0827</td>
<td>0.112**</td>
<td>0.0578</td>
<td>0.0494</td>
</tr>
<tr>
<td></td>
<td>(0.0481)</td>
<td>(0.0527)</td>
<td>(0.0512)</td>
<td>(0.0551)</td>
<td>(0.0531)</td>
<td>(0.0561)</td>
</tr>
<tr>
<td>Black²</td>
<td>0.117***</td>
<td>0.0903*</td>
<td>0.135***</td>
<td>0.312***</td>
<td>0.257***</td>
<td>0.266***</td>
</tr>
<tr>
<td></td>
<td>(0.0416)</td>
<td>(0.0525)</td>
<td>(0.0500)</td>
<td>(0.0462)</td>
<td>(0.0484)</td>
<td>(0.0495)</td>
</tr>
<tr>
<td>SES</td>
<td>-0.361***</td>
<td>-0.213***</td>
<td>-0.115***</td>
<td>-0.317***</td>
<td>-0.187***</td>
<td>-0.124***</td>
</tr>
<tr>
<td></td>
<td>(0.0229)</td>
<td>(0.0236)</td>
<td>(0.0257)</td>
<td>(0.0244)</td>
<td>(0.0251)</td>
<td>(0.0265)</td>
</tr>
<tr>
<td>HS Grades</td>
<td>-0.147***</td>
<td>-0.0598**</td>
<td>-0.155***</td>
<td>-0.0923***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0223)</td>
<td>(0.0234)</td>
<td>(0.0211)</td>
<td>(0.0230)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Disadvantage</td>
<td>0.0572**</td>
<td>0.0376</td>
<td>0.0659**</td>
<td>0.0592**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0250)</td>
<td>(0.0246)</td>
<td>(0.0263)</td>
<td>(0.0285)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friend plans college</td>
<td>-0.266***</td>
<td>-0.150***</td>
<td>-0.124***</td>
<td>-0.0475</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0359)</td>
<td>(0.0361)</td>
<td>(0.0432)</td>
<td>(0.0403)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dropped out HS</td>
<td>0.446***</td>
<td>0.367***</td>
<td>0.357***</td>
<td>0.332***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0444)</td>
<td>(0.0433)</td>
<td>(0.0445)</td>
<td>(0.0438)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marginal College²</td>
<td>-0.168***</td>
<td></td>
<td>-0.0682</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0406)</td>
<td></td>
<td>(0.0472)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid Comp.²</td>
<td>-0.919***</td>
<td></td>
<td>-0.570***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0586)</td>
<td></td>
<td>(0.0646)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifelong Student²</td>
<td>-0.234***</td>
<td></td>
<td>-0.0250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0652)</td>
<td></td>
<td>(0.0829)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayed Comp.²</td>
<td>-0.332***</td>
<td></td>
<td>-0.135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0864)</td>
<td></td>
<td>(0.105)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.808***</td>
<td>1.056***</td>
<td>0.774***</td>
<td>0.710***</td>
<td>0.934***</td>
<td>0.711***</td>
</tr>
<tr>
<td></td>
<td>(0.0553)</td>
<td>(0.102)</td>
<td>(0.103)</td>
<td>(0.0627)</td>
<td>(0.0867)</td>
<td>(0.0903)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,374</td>
<td>2,374</td>
<td>2,374</td>
<td>2,392</td>
<td>2,392</td>
<td>2,392</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.127</td>
<td>0.223</td>
<td>0.305</td>
<td>0.136</td>
<td>0.201</td>
<td>0.232</td>
</tr>
</tbody>
</table>

Source: NLSY79; *p<.05, **p<.01, ***p<.001; ¹Reference group=White; ²Reference Group=Non-college

The patterns observed for females hold among males as well, but are somewhat attenuated.

The negative impact of SES on distance to the collegiate transition sequence is smaller among males
than among females, even after high school variables are controlled. The difference in distance to the collegiate pattern between rapid completers and non-enrollees is more than half of a standard deviation, adjusting for background variables. And marginal college-goers, lifelong students, and delayed completers are closer to the collegiate pattern than non-enrollees, but these differences do not attain statistical significance.

**Conclusion**

The transition to adulthood is the period in which one’s adult socioeconomic status, and thereby the socioeconomic status of one’s offspring, is effectively realized. There is substantial room for agency here; one’s path into adulthood is not dictated by origins. But neither is agency able to give the slip to structure. The transition to adulthood is definitely a class-graded phenomenon.

This chapter has revealed the degree to which an orderly structuring of this transition is reserved for those who engage in a normative path through higher education. Higher education imposes standardization on the early life course in the same manner as does high school, but only for those who participate in it mostly full-time, mostly consecutively, and mostly without pause after high school. Those who participate in non-standard ways tend to have labor market, marriage, and parenthood trajectories in early adulthood that resemble those who do not attend college, though slightly less unstable overall. This is true in terms of timing: non-traditional college students tend to transition to full-time employment, marriage and parenthood at ages only slightly later than those who do not enroll in college. But it is also true in terms of heterogeneity: I find that non-traditional students spend comparable time unemployed and in part-time work, and have comparable rates of marital dissolution to those who never attended college.

College attendance has become a near-universal ideal and expectation in the contemporary United States. The collegiate experience, and especially its residential-campus version, is a key
component of “emerging adulthood”, a time in which the absence of serious responsibilities is combined with a freedom made possible by financial wherewithal. It is likely that an emerging adulthood has become part of the expected and desired life course for most young people, whether or not they have the means to support it. But the actual life course structuring which permits a full “emerging adulthood” is accomplished through traditional college attendance. This in turn needs to be financed, either through scholarships, parental assistance, loans, or personal income. Brint and Rotondi (2008), for instance, found that among many residential college-goers, debt was seen as necessary in order to purchase the freedom to participate in the “full college experience”

There are two complications to this, however. The first is that colleges are “greedy institutions”. That is, they do not well tolerate a partial commitment to the student role. For traditional students, this is not experienced as cumbersome but as natural; it is expected that college is “demanding”. The extent of collegiate demands only becomes apparent when one attempts to combine college attendance – even part-time attendance – with major other adult roles and commitments such as child care or full-time work. Therefore, traditional college attendance not only structures the life course, but taking divergent pathways into adulthood renders completion more difficult.

Secondly, traditional college attendance requires resources. Today, in order to attend college full-time while living on campus and not working more than part-time, one needs money both to support oneself and to pay tuition bills. For students from affluent backgrounds this is not a problem, and others who are very academically or athletically talented are able to secure generous scholarships. Many others simply defer the task of payment into the future through loans. But a good many others attempt to sidestep the difficulty by attending college in a cheaper manner, through living at home, working extensively, and attending school part-time. In doing so, they are less integrated into colleges or communities of college-goers, and are more likely to accumulate adult responsibilities which can conflict
with their goals of college completion. As a result, their paths to adulthood tend to resemble those of individuals who do not go to college rather than of those who attend full-time and complete quickly.
Chapter 4

Going Back to School as an Adult: An Event History Analysis

Adult students’ decisions to enroll occur in a context which is dramatically different from that of younger students. Unlike “traditional” college students, adult students do not cross the threshold into college along with a large portion of age-peers, but make highly individual, isolated enrollment decisions. Whereas younger students often receive substantial institutional prompting and assistance (from high schools) to enroll in college, adults typically receive little if any institutional priming and indeed must typically seek out whatever assistance they do obtain. Whereas younger students are mostly unencumbered by additional responsibilities, most adult students have accumulated adult commitments which claim substantial time and effort, and so their moving into the student role occurs against the grain of the other aspects of their lives (Gigliotti & Huff 1995). Whereas younger students often enroll with full and unqualified support – emotional if not financial – from their families, adult students often must coordinate arrangements with family members in order to render their enrollment possible, and their enrollment frequently imposes substantial costs on their families. In short, the enrollment decision for the adult enrollee involves far more conscious choice, and occurs in the face of greater obstacles, than that of the traditional college-goer.

In this chapter I examine the college enrollment behavior of adults without a college degree. There are two matters of empirical interest: who enrolls at all, and the timing of enrollment among those who do. As with those at younger ages, adults differ in terms of their orientation toward the very idea of college enrollment, and these orientations are likely related to social and academic background characteristics. But even among adults who would like to enroll in college, when precisely this occurs likely depends on one’s present familial and economic circumstances. Elucidating what it is that leads some adults to enroll at the moments that they do is the primary concern in what follows.
I in particular focus on the labor market conditions which lead to adult enrollment. Over recent decades, the wages of male workers without a college degree have stagnated or declined (Morris & Western 1999; Freeman & Katz 1994). The hardship these workers face is often attributed to the fact that they have not completed a college degree, and further education or retraining is prescribed by policymakers as the solution. That large numbers of adults are currently enrolled in colleges suggests that workers are indeed responding to such signals from both the economy and the culture, but the degree to which adult students’ enrollment is actually a response to the labor market has yet to be established.

In what follows, I first review the theoretical and empirical literature which sheds light on the causes of returning to college among adults. I then make use of discreet-period event history modeling to investigate both background and contemporaneous influences on adult undergraduate enrollment. My findings suggest that at least some adult enrollment is in response to labor market pressures. I find additionally that adults who had college-educated parents, and better grades in high school, are more likely to enroll, and that those who attended high schools with disadvantaged populations are less likely to do so. Finally, I find that impact of divorce differs by gender, resulting in higher odds of attendance among females and lower odds among males.

**Theoretical Background and Prior Research**

*Why Do Adults Enroll in College?*

Researchers often presume that adult enrollment is economically motivated (Lifelong Learning Task Force, 2000), but adults may have non-economic motives for college participation. Individuals may enroll out of a desire for self-actualization or realization, in order to finish something they wished they had completed earlier. They may wish to attain the social status of “college graduate” and its attendant sense of accomplishment and respect. Partaking in higher education can also be motivated by the desire
for personal growth through knowledge acquisition and exposure to an intellectual environment. Indeed, research has generally shown older students to be more motivated by intrinsic interest in learning than younger students (Bye, Pushkar & Conway 2007; Eppler & Harju 1997; Wolfgang & Dowling 1981). Finally, it might be prompted by a desire to set a good example for children or younger relatives, to role model a commitment to and a valuing of education and educational attainment.

Even economic, or job-related, motivation for enrollment in college is not monolithic, and it is useful to distinguish among three distinct types of economically-motivated enrollment. *Aspirational enrollment* occurs when there is an expectation that further credentialing will result in upward economic mobility (Light 1996), usually in the form of higher wages or better working conditions. This could occur through a promotion within one’s firm, but it could also involve leaving one’s firm, field, or both. *Career-change enrollment*, by contrast, involves schooling as a means of transferring laterally in the labor market – acquiring a different job, but not necessarily one that is more remunerative. It should be noted as well that changing careers need not necessarily entail leaving one’s field or firm. Finally, individuals engaging in *defensive enrollment* seek further credentialing as a means of staving off the deterioration of wages or working conditions they either have already experienced or feel they are in imminent danger of experiencing. Such deterioration could take the form of actual or de facto pay cuts, production speed-up, the imposition of mandatory overtime, the elimination of internal career ladders, increasingly punitive and arbitrary treatment by supervisors, or cuts to pensions or health benefit packages. This sort of enrollment is most probable for whose skills have become obsolete, or whose current levels of credentialing and experience command decreasing returns on the labor market (Bills 2000). Individuals fear the “specter of uselessness” (Sennett 2006), and believe that further education will make them less dispensable.

*Theories of Educational Attainment*
The determinants of adult schooling have been but scantily theorized, but the broader matter of the determinants of schooling in the general population has been the subject of a veritable mountain of scholarship dating at least to the 1960s. Theory undergirding this research has split largely into two camps or perspectives. The meritocratic perspective, associated with human capital theory, argues that education is rationally selective: those who are better able to gain from it are more likely to take it up (Becker 1962, 1964). Proponents assert that the fundamental factor separating out those who do and do not complete additional schooling is the capacity to be productively trained – in short, native intelligence or ability. In the case of specific training – on-the-job training – it is employers who do the selecting, investing in those who they believe to be most trainable. In the case of non-compulsory formal schooling, the selecting agents are the potential students themselves; it is presumed that individuals are on the whole able to evaluate their own likelihood of profiting from additional education. Becker argued that this self-selection is the reason why naïve estimates of economic returns to additional years of schooling are non-linear: education has a greater impact on the more able, who are also more likely to acquire more schooling. From this perspective, valid measures of aptitude ought to be the best, and perhaps the only, net predictors of educational attainment.

By contrast, the social reproduction perspective argues that education is an objectively valuable good, access to which is limited in such a way that the socially privileged are better able to acquire it (Bourdieu & Passeron 1977; Bowles & Gintis 1976; Giroux 1983). Whether out of intention, functional imperative, or unacknowledged bias, educational systems differentially select individuals for further schooling according to social class origins as well as ascribed attributes such as race, ethnicity, immigrant status, rural or urban origins, and gender. Though explicit privileging on the basis of class or ascribed characteristics has been eliminated in modern educational systems, higher-status youth tend to

55 For an exception, see Cross (1981), who proposes a model of adult participation in any learning project, be it formal schooling or self-directed learning. Among the factors she identifies as important are one’s evaluation of one’s own aptitude, one’s attitude towards education, life transitions, goals and expectations, access to information, and institutional barriers or opportunities.
possess resources, including cultural dispositions, inclinations, mannerisms, and skills, which render them more likely to succeed in school. In part this selection occurs through differences in what Bourdieu calls *illusio* (Bourdieu & Wacquant, 1992), the culturally-inculcated feeling that the (academic) game is worth the effort. From this perspective, lower-status individuals frequently engage in what Willis (1979) called “self-disqualification”: not attempting to succeed in school out of a recognition of the objectively low likelihood of its translating into upward mobility (Bourdieu & Passeron 1977; MacLeod 1984; Ogbu 1974; Willis 1979).

Despite the best efforts of either perspective’s strongest proponents avoid so admitting, the weight of empirical evidence indicates that both academic ability and social background independently influence selection into higher education (Blau & Duncan 1964; Lavin & Hyllegard 1996; Sewall & Shah 1967; Sirin 2005; White 1982). One of the most important contributions of the classic status attainment literature was to demonstrate that the effects of family background on adult status work in part through academic outcomes (e.g., Jencks et al. 1972). Family resources influence academic outcomes in part directly and in part through the attendance of schools with better-off and more academically-oriented peers (Caldas & Bankston 1997; Sacerdote 2011). Two matters which remain controversial are whether socioeconomic advantage works through the attendance of better-resourced schools (Greenwald & Hedges 1996; Hanushek 1997), and what the relationship is between social background and “innate” ability as measured by aptitude tests (Turkheimer et al. 2003).

**Factors Predicting Undergraduate Enrollment among Adults**

Scholars have extended this line of inquiry to adults as well. Socioeconomic background and academic performance impact the behavioral prerequisites of adult college participation: delayed enrollment (Bozick & DeLuca 2005; Goldrick-Rab & Han 2011; Rowan-Kenyon 2007), dropping or stopping out of college (Desjardins, Ahlberg & McCall 2006; Goldrick-Rab 2006; Milesi 2011), and part-

Among those who reach adulthood without a bachelor’s, scholars have postulated the existence of a “Matthew Effect” whereby more advantaged social origins continue to contribute to educational upgrading and success (Kerchoff & Glennie 1999; Pallas 2002). This could occur through a number of mechanisms, including: direct familial support for education; familial encouragement or pressure; the early development of a positive orientation towards schooling; knowledge of the impact of schooling on income and occupation; greater academic confidence as a result of prior success; more positive educational experiences in better-resourced high schools; and material or motivational support from spouses or partners. A stream of empirical research has supported this suspicion, finding the probability of adult college enrollment to be predicted by various measures of social background, including maternal education (Elman & O’Rand, 2004; Light 1995; Marcus 1986; Taniguchi & Kaufman 2007), paternal occupational prestige (Elman & O’Rand 1998), and household income (Light 1995; Marcus 1986).

Measured cognitive ability has also been consistently found to be associated with the propensity of adults to enroll in college (Astone et al. 2000; Felmlee 1988; Jacob & Weiss 2011; Light 1995; Taniguchi & Kaufman 2007). Studies have also generally found that prior years of educational attainment predict further schooling (Astone et al. 2000; Bradburn, Moen & Dempster-McClain 1995; Elman & O’Rand 2004; Felmlee 1988), though ceiling effects exist in this relationship (Bradburn, Moen & Dempster-McClain 1995).

56 The “Matthew effect” is a term coined by R.K. Merton (1968) to describe the cumulative effects of renown and eminence among scientists. It was has been more recently applied to cumulative advantage in educational life courses by Kerchoff & Glennie (1999) and Pallas (2002).
Net of socioeconomic status, members of minority groups appear to be more, not less, likely to return to college as adults. This pattern has been more consistently established with regard to African-Americans (Elman & O’Rand 2007; Jacob & Weiss 2011; Rich & Kim 1999), but some research suggests that it may be true of Latinos as well (Light 1995; Schatzel, Callahan & Davis 2013; Taniguchi & Kaufman 2007). These findings echo those of greater postsecondary enrollment (net of SES) by African-Americans more generally (Cameron & Heckman 2001), though Black & Sufi (2002) argue that this is isolated to low-SES individuals and has vanished since the 1970s.

In a well-known empirical discovery, women have exhibited greater higher educational enrollment and completion since the late 1970s (Bailey & Dynarski 2011; Buchman & DiPrete 2006; Goldin, Katz & Kuziekmo 2006). This pattern appears to extend to enrollment in higher education among adults (Jacob & Weiss 2011), though why this might be is not well-understood.

Scholars have also found re-enrollment to be influenced by factors that vary over one’s lifetime. College participation appears to be impeded by the presence of young children (Elman & O’Rand 2004; Felmlee 1988; Taniguchi & Kaufman 2007), except among middle-class whites (Hoestler 2007). The impact of marital status on enrollment has been studied mostly among women, and this research has established that there is greater propensity to enroll prior to marriage (Elman & O’Rand 2004; Felmlee 1988) or following a divorce (Bradburn, Moen & Dempster-McClain 1995; Taniguchi & Kaufman 2007). This could either do with the inhibiting effects of marital role expectations on women’s freedom, but it is also possible that divorce incentivizes the return to school through its dramatically depressive impact on women’s household income.

There is some evidence that instability in the labor market also increases adults’ propensity to attend college. In a study of employed workers, perceived labor market insecurity was related to plans to enroll (Elman & O’Rand 2002). There is also evidence that enrollment is greater in recessionary years
(Elman & O’Rand 2004) and when there is higher unemployment (Light 1995). Additionally, research has shown the community college enrollments rise during recessions (Betts & McFarland 1995; Fry 2009; Pennington, McGinty & Williams 2002). Schatzel, Callahan and Davis (2013) in an interview-based study, find that recent job loss is a frequently-mentioned factor influencing participation in higher education. But the direct impact of job loss on adult enrollment has not been investigated.

Contributions of this Study

As the preceding review has suggested, there is an established but small empirical literature on the determinants of adult enrollment, but many such studies are plagued by data insufficiencies and methodological shortcomings. Some are able to explore adult enrollment over a small span of years (Astone et al. 2000; Elman & O’Rand 2004, 2007). Others model together, as a single outcome, graduate and undergraduate enrollment (Elman & O’Rand 2007; Felmlee 1988; Hoestler 2007; Jacob & Weiss 2011, Light 1995) or undergraduate and remedial high school (GED) enrollment (Astone et al. 2000). With very few exceptions (Astone et al. 2000), researchers consider only the determinants of first enrollment or re-enrollment, neglecting enrollments which occur subsequently. I improve upon prior research methodologically in three ways. First, I employ data which enable me to investigate enrollment behavior across the majority of working adulthood. Secondly, I separate undergraduate enrollment from participation in other levels of education. Finally, I investigate the correlates of not simply the first, but multiple enrollments which occur across the life course. This latter point is crucial because, as I demonstrate, multiple enrollment spells are prevalent among adult educational participants.

This study makes four additional empirical contributions. First, I investigate the independent effects of high school experiences, including high school socioeconomic context and peer influences, on adult enrollment. Secondly, I explore how the relationship between family background and enrollment
is mediated by measured cognitive ability and high school performance. Third, I directly evaluate the impact of job loss and of contextual economic factors on college enrollment. Finally, while many studies have separately modeled male and female enrollment behavior, I also investigate another source of potential heterogeneity: age at first postsecondary enrollment. This is important because one of the most powerful predictors of enrollment is prior enrollment, and because returning students and first-time adult enrolers may have very different socioeconomic backgrounds, labor market histories, and cognitive orientations towards schooling.

**Data & Methods**

*Data*

As in chapter 3, I employ data from the National Longitudinal Survey of Youth, 1979 cohort, because this dataset is uniquely able to capture enrollment and other life-course events over most of adults’ prime working years. The NLSY79 presents researchers with a rich set of variables covering demographic attributes, socioeconomic background, and high school experiences and grades. It also contains substantial information on the timing of enrollment (though this requires careful reconstruction), as well as on the timings of job loss, marital transitions, and childbearing.

In modeling the timing of events, it is essential first to define the risk set – the individuals exposed to the risk of experiencing a given event during a given period (Allison 1984). As I am interested in adult undergraduate enrollment, I define my initial risk set to be individuals who reach age 25 without having attained a bachelor’s degree, and these individuals remain at risk until they either earn a bachelor’s degree or exit the survey for other reasons. Additionally, I only include individuals who participated in the survey at least through their 35th birthday. I produce a person-period dataset of

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57 It is common for researchers to model the *contemporaneous* impact of labor market status on enrollment, and to find that re-enrollment is predicted by part-time work. But this is a methodological error, for it fails to account for the fact that many individuals cut back their work hours in order to accommodate college attendance. Correctly modeling this relationship requires lagging the labor market status variable.
169,932 person-year observations clustered within 7600 individuals. Because survey attrition by age 35 is non-random, I employ weights which adjust for the probability of retention (see Appendix 2 for the construction of these weights).

**Dependent Variable**

The outcome of interest is college enrollment for an individual \( i \) in year \( t \). The restriction of the risk set to adults without bachelor’s degrees excludes graduate school enrollment from analysis, and as questions explicitly distinguish college from non-college enrollment I am also able to exclude enrollment to for the purposes of earning a high school equivalent or vocational certificate. I do not, however, distinguish between enrollments in two- and four-year institutions, and thus cannot be sure I have isolated bachelor’s degree oriented enrollment per se; individuals seeking terminal associate degrees may be included as well. This is unavoidable for several reasons. First, and most importantly, the NLSY did not inquire into respondents’ degree intentions. Second, individuals enroll in community colleges for various reasons, but research has documented that a large majority aspire to earn a bachelor’s degree (Horn & Skomsvold 2012; Santos Laanan 2003). Given the considerable size of the community college sector and the over-representation of adults in it (see Chapter 1), excluding enrollment in these institutions would overlook the majority of incidents of precisely the behavior in which I am interested. Finally, the degree intentions of community college students can change during an enrollment spell; a BA-intending student may “cool out” into a terminal associates program (Clark 1960), but the opposite may also occur (Alexander, Bozick & Entwistle 2008; Leigh & Gill 2003).

I allow for individuals to engage in multiple enrollment spells because adult students are highly likely to engage in multiple enrollments. Figure 4.1 demonstrates that in these data, 35% of those who enroll as adults do so multiple times, and 15% enroll at least three times. Multiple enrollment spells are even more prevalent if we consider these individuals’ entire postsecondary careers – that is, if we
include enrollments while individuals were “traditionally” aged. Considering this broader period, it is found that over 80% of adult enrolers engaged in more than one spell of undergraduate enrollment, and 47% enrolled three or more times.

Figure 4.1. Undergraduate spells engaged in by adult undergraduates, post-25 and during total educational career (Source: NLSY79).

Independent Variables

Demographic Variables and Family Background. I employ indicator variables for respondents’ gender and race/ethnicity (Latino and Black versus non-Hispanic White/Other) and for growing up in a single-parent household, defined as living with a single male or single female parent figure at age 14. Socioeconomic background is measured through parental education and household income. I define parental education attainment as that of either the respondent’s mother or father, depending on which was highest. As the NLSY did not query respondents explicitly regarding parental degree attainment, this must be presumed from years of schooling completed. Years of education less than twelve is coded as “less than high school”; exactly twelve as “high school degree”, thirteen through fifteen as “some
college”, and sixteen or more as “bachelor’s degree or higher”. Family income is taken from the survey’s baseline year and is defined in relation to that year’s national median income, adjusted for household size (see Appendix 2).

**Cognitive Ability, High School Experiences, and Adolescent Attitudes.** Cognitive ability is taken from Armed Services Qualifying Test (AFQT) scores, which was administered to 94% of respondents. Arithmetic, vocabulary, and reading comprehension scores were combined and normed to produce percentile scores, which were renormed in 2006 in a manner which controls for age at test-completion (see Ing et al. 2012 for details). Data pertaining to high school academic performance are culled from high school transcripts. Grade point averages were not collected, but grades from up to 64 individual courses were collected per respondent which were then coded on an integer scale from 0 to 4. The number of grades available varies widely by respondent, but for most respondents information for at least 12 courses is available. I average the available grades for each respondent, for a maximum of 12 grades, to arrive at a calculation of average high school academic performance.

High school disadvantage is derived from the following measures gathered from surveys sent to respondents’ high school administrators: the percentage of students in the school classified as economically disadvantaged, the percent of students who were either Black or Latino, and the school’s dropout rate. These items were combined into a summated rating scale with a reliability of $\alpha=.61$. Higher values of this variable indicate a more disadvantaged high school environment. Because dropping out of high school without a degree places an additional burden on individuals who would like to earn a college degree, I include a dummy variable that identifies respondents who left high school early. Finally, I identify students who had disciplinary problems in high school as those who reported ever either being suspended or expelled while in high school.
I also include measures of self-efficacy and gender attitudes. The former comes from a psychological battery which measured beliefs regarding control over one’s own fate. Higher scores on this scale, known as the Rotter locus of control scale, indicate greater belief in the influence of external circumstances over life outcomes. In the base year, respondents were asked to indicate their level of agreement with a series of statements relating to gender roles. Examples include “a woman’s place is in the home, not in the office or shop” and “the employment of wives leads to more juvenile delinquency”. Responses were in a Likert-item format which forced variance by omitting a neutral option. I combined responses to five such questions into a summated rating scale with Chronbach’s alpha of $\alpha=.81$. Higher scores indicate advocacy of more traditional, patriarchal gender roles.

*Life Events and Adult Roles.* Though the NLSY79 has only been carried out biennially since 1994, respondents were asked retrospective questions about the timing of life events for every year between 1972 and 2010. I define marital status through indicators for never-married, divorced or separated (the two statuses are combined), or widowed statuses against the reference status of being married. Because demands on parents’ time and energy varies by the age of their children, I include dummy variables defining the age of one’s youngest child: pre-school aged, elementary school aged, middle/high school aged, and adult children versus the reference state of having no children.

I also measure the impact of involuntary job loss, defined as a job ending due to layoff or termination. The job loss indicator variable is lagged since enrollment in college typically cannot take place immediately, but instead only at the start of a new semester, a number of months after initial application. It is also probable that a job loss might lead a respondent to return to school only after a few months of attempts to secure satisfactory employment.

*National Economic Indicators.* I include three variables measuring broader economic conditions which may impact individuals’ enrollment behavior: the national unemployment rate, the rate of GDP
growth, and the economic return to a college degree. The latter variable is the ratio of the median hourly wage of a college-educated worker to the median hourly wage of a worker with a high school degree in a given year. These variables are measured yearly, and are lagged, because it is likely that contextual factors would influence enrollment behavior in the next year.

*Event History Models*

In modeling the timing of events given person-period data, a discreet-time proportional hazards model which employs the complimentary log-log link function is appropriate (Mills 2011). The model takes the basic form

$$\log[-\log(1 - P(Y_{it} = 1))] = \alpha + \beta_iX_i + \gamma_iZ_{it} + \epsilon_{it}$$

The dependent variable $Y$, enrollment status of individual $i$ in year $t$, is set to 1 if the individual is enrolled and 0 otherwise. The right side of the equation includes a vector $X$ of time-invariant predictors and a vector $Z$ of time-varying predictors. However, this specification is complicated by the fact degrees take multiple years complete, often even given prior enrollments. This will result in temporal autocorrelation among individuals’ enrollment statuses. I address this through the introduction of a lagged enrollment term:

$$\log[-\log(1 - P(Y_{it} = 1))] = \alpha + \pi Y_{i,t-1} + \beta X_i + \gamma Z_{it} + \epsilon_{it}$$

Individuals are also more likely to enroll if they have already enrolled in the past for two reasons. First, individuals who have been previously enrolled have likely earned credits towards a degree, and therefore are closer to completion. That less time and effort is necessarily in order to complete a degree may make re-enrollment more attractive, and individuals may feel a greater need to complete in order to validate what they perceive to be the “sunk costs” of prior efforts. Secondly there is a possibility of an underlying individual predisposition towards enrollment in schooling which is not
completely accounted for by observed time-invariant covariates described above or captured in the individual pattern of time-varying controls described in this section. The former concern is addressed through the inclusion of a time-varying covariate which measures, for each individual, the cumulative number of years of post-secondary enrollment (completed or incomplete) prior to year t. I address the matter of unobserved individual-level predisposition by employing a variance-correction model, which uses clustered standard errors and a robust variance-covariance matrix\(^{58}\) (Box-Steffensmeier & Jones 2004).

Time at risk must be explicitly accounted for in discreet-state event history models (Box-Steffensmeier & Jones 2004). I control for time out of school, defined as the number of years since last school enrollment (high school or college), with linear, squared and cubic terms. Age, among the most commented-upon determinants of enrollment behavior in the human capital framework (Becker 1964), is modeled with a linear and a squared term. Finally, I also enter a linear trend term - the year itself - to account for the possibility of a secular trend toward greater collegiate participation over time independent of age and other factors.

**Results**

*Baseline hazard of enrollment*

The baseline hazard rate can be conceptualized in three ways: as a function of time in years, as a function of age, and as a function of years since last school enrollment (i.e. years exposed to the risk of re-enrollment). Table 4.1, which displays enrollment probabilities for the sample by year, reveals a strong trend downward in the incidence of adult enrollment from nearly 15% in 1982 to a low of 1.42% in 2010. In the early years, only the oldest cohorts are represented in these calculations, as they only

\(^{58}\) In modeling the occurrence of repeated events, we must take into account that the events are themselves not independent. The problem is similar to that of autocorrelation in regression, and will lead to incorrect standard errors. The most common practice is to adjust the variance-covariance matrix to take individual-level effects into account (see also Box-Steffensmeier & Zorn, 2002).
include enrollment by individuals aged 25 and older. Interestingly, though the overall trend is clearly downward, enrollment rates do not consistently decrease every year.

Table 4.1. Baseline hazard rate by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Hazard of Enrollment</th>
<th>95% CI low</th>
<th>95% CI high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>.1456</td>
<td>.1115</td>
<td>.1797</td>
</tr>
<tr>
<td>1983</td>
<td>.1194</td>
<td>.0983</td>
<td>.1405</td>
</tr>
<tr>
<td>1984</td>
<td>.0904</td>
<td>.0750</td>
<td>.1058</td>
</tr>
<tr>
<td>1985</td>
<td>.0749</td>
<td>.0635</td>
<td>.0862</td>
</tr>
<tr>
<td>1986</td>
<td>.0560</td>
<td>.0474</td>
<td>.0645</td>
</tr>
<tr>
<td>1987</td>
<td>.0773</td>
<td>.0677</td>
<td>.0868</td>
</tr>
<tr>
<td>1988</td>
<td>.0839</td>
<td>.0749</td>
<td>.0930</td>
</tr>
<tr>
<td>1989</td>
<td>.0826</td>
<td>.0740</td>
<td>.0912</td>
</tr>
<tr>
<td>1990</td>
<td>.0692</td>
<td>.0613</td>
<td>.0771</td>
</tr>
<tr>
<td>1991</td>
<td>.0589</td>
<td>.0515</td>
<td>.0662</td>
</tr>
<tr>
<td>1992</td>
<td>.0692</td>
<td>.0613</td>
<td>.0771</td>
</tr>
<tr>
<td>1993</td>
<td>.0602</td>
<td>.0529</td>
<td>.0675</td>
</tr>
<tr>
<td>1994</td>
<td>.0518</td>
<td>.0449</td>
<td>.0587</td>
</tr>
<tr>
<td>1995</td>
<td>.0447</td>
<td>.0382</td>
<td>.0512</td>
</tr>
<tr>
<td>1996</td>
<td>.0594</td>
<td>.0520</td>
<td>.0667</td>
</tr>
<tr>
<td>1997</td>
<td>.0380</td>
<td>.0320</td>
<td>.0439</td>
</tr>
<tr>
<td>1998</td>
<td>.0393</td>
<td>.0333</td>
<td>.0452</td>
</tr>
<tr>
<td>1999</td>
<td>.0348</td>
<td>.0292</td>
<td>.0404</td>
</tr>
<tr>
<td>2000</td>
<td>.0355</td>
<td>.0297</td>
<td>.0412</td>
</tr>
<tr>
<td>2001</td>
<td>.0294</td>
<td>.0241</td>
<td>.0347</td>
</tr>
<tr>
<td>2002</td>
<td>.0291</td>
<td>.0239</td>
<td>.0344</td>
</tr>
<tr>
<td>2003</td>
<td>.0314</td>
<td>.0256</td>
<td>.0372</td>
</tr>
<tr>
<td>2004</td>
<td>.0306</td>
<td>.0249</td>
<td>.0363</td>
</tr>
<tr>
<td>2005</td>
<td>.0294</td>
<td>.0239</td>
<td>.0349</td>
</tr>
<tr>
<td>2006</td>
<td>.0286</td>
<td>.0230</td>
<td>.0342</td>
</tr>
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<td>2007</td>
<td>.0258</td>
<td>.0206</td>
<td>.0311</td>
</tr>
<tr>
<td>2008</td>
<td>.0208</td>
<td>.0159</td>
<td>.0256</td>
</tr>
<tr>
<td>2009</td>
<td>.0242</td>
<td>.0186</td>
<td>.0297</td>
</tr>
<tr>
<td>2010</td>
<td>.0142</td>
<td>.0099</td>
<td>.0185</td>
</tr>
</tbody>
</table>

Source: NLSY79

In Figure 4.2, the relationship between age and enrollment is specified with a quadratic function separately by gender. The probability of enrollment declines by age for both genders, but the slopes vary. For males, the probability of enrolment falls off more rapidly, leveling out at a low level at older
ages. The downward trend among females is more gradual, and females have a higher hazard of enrollment at every age. In Figure 4.3, I model the baseline hazard in terms of years since last school enrollment with a cubic function separately by gender. Both males and females begin with a relatively high probability of enrollment, and the enrollment probabilities are similar. The probability of enrollment for males falls off faster than that for females', reaching just above .05 ten years after last enrollment; at this remove the probability for females is about .09. The genders converge at near-zero probability twenty years after last enrollment.

Figure 4.2

![Graph showing probability of enrollment in college by age and gender](image)

*Source: NLSY-79*

**Descriptive Statistics**

Characteristics of the sample for this analysis are given in Table 4.2. The population is, again, individuals who reached age 25 without a college degree. That this group is negatively selected in terms of SES and academic preparation is evident from these figures. The proportion of respondents whose parents never attended college is about 75% in this sample, substantially higher than in the NSLY sample as a whole. High school dropouts are over-represented, as are students who had substantial disciplinary
problems in high school. AFQT scores are also bit below average. The sample is also more heavily minority, male, and from single-parent families than the full NLSY population.

Figure 4.3.

![Graph showing Probability of re-enrollment in college by years not enrolled.](image)

**Event History Models**

I now proceed, in Table 4.3 to investigate the correlates of return to college among adults with a series of nested models evaluating what might be considered “layers” of influences on enrollment behavior. Coefficients have been exponentiated, and so can be interpreted as changes in the hazard ratio associated with a unit change in the relevant independent variable. Coefficients greater than one identify factors which increase the likelihood of enrollment. As mentioned previously, all models contain a large number of baseline controls. The lagged enrollment variable is, as is expected, a strong positive predictor of enrollment in all models, and the years out of school is related to a reduced chance of enrollment. One prior year of enrollment is related to a 7% higher probability of later enrollment. Finally, a positive coefficient for the linear trend variable (“Year”) reflects the historical increase in
college-going by the population as a whole over this period, *net of* age, years since enrollment, and prior enrollments.

Table 4.2. Time-invariant covariate means for full NLSY79 sample and for non-baccalaureate adults

<table>
<thead>
<tr>
<th></th>
<th>Full NLSY Mean</th>
<th>Non-Baccalaureate Adult Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>.4709</td>
<td>.4707</td>
<td>.4991</td>
<td>0,1</td>
</tr>
<tr>
<td>Latin</td>
<td>.0606</td>
<td>.0690</td>
<td>.2535</td>
<td>0,1</td>
</tr>
<tr>
<td>Black</td>
<td>.1336</td>
<td>.1493</td>
<td>.3564</td>
<td>0,1</td>
</tr>
<tr>
<td>Parental ed&lt;HS</td>
<td>.2610</td>
<td>.3121</td>
<td>.4634</td>
<td>0,1</td>
</tr>
<tr>
<td>Parental ed=HS</td>
<td>.4113</td>
<td>.4373</td>
<td>.4960</td>
<td>0,1</td>
</tr>
<tr>
<td>Parental ed=some college</td>
<td>.1266</td>
<td>.1189</td>
<td>.3237</td>
<td>0,1</td>
</tr>
<tr>
<td>Parental</td>
<td>.2012</td>
<td>.1315</td>
<td>.3379</td>
<td>0,1</td>
</tr>
<tr>
<td>Ed=bachelor’s/higher</td>
<td>96.84</td>
<td>87.11</td>
<td>68.27</td>
<td>0,560.20</td>
</tr>
<tr>
<td>Family income as % of median</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single parent family</td>
<td>.1479</td>
<td>.1622</td>
<td>.3687</td>
<td>0,1</td>
</tr>
<tr>
<td>Dropped out of HS</td>
<td>.1776</td>
<td>.2214</td>
<td>.4152</td>
<td>0,1</td>
</tr>
<tr>
<td>Average HS grade</td>
<td>3.54</td>
<td>3.289</td>
<td>.8865</td>
<td>0,4</td>
</tr>
<tr>
<td>HS disadvantage</td>
<td>-.3444</td>
<td>-.0914</td>
<td>.7558</td>
<td>-2.6945, 9.2279</td>
</tr>
<tr>
<td>AFQT</td>
<td>48.96</td>
<td>42.2394</td>
<td>26.9268</td>
<td>0,100</td>
</tr>
<tr>
<td>Disciplinary problems</td>
<td>.2103</td>
<td>.2558</td>
<td>.4363</td>
<td>0,1</td>
</tr>
<tr>
<td>Locus of control</td>
<td>.0858</td>
<td>8.7888</td>
<td>2.4102</td>
<td>0,16</td>
</tr>
<tr>
<td>Traditional gender values</td>
<td>2.33</td>
<td>2.41</td>
<td>.8256</td>
<td>0,5</td>
</tr>
</tbody>
</table>

Source: NLSY79

Model 1 includes time-invariant demographic and socioeconomic background variables. As is to be expected from analyses in Chapter 1, females are more likely than males to enroll in college at some point in their adulthood. Net of gender and SES, African-Americans are slightly less likely than non-Hispanic whites to re-enroll, but Latinos are not. Parental education is related to re-enrollment in a monotonic fashion; compared with those whose parents did not finish high school, the odds are 8% higher for the children of high school graduates, 12% higher for those of parents with some college education, and 31% higher for the children of college graduates.
In Model 2 I add a series of variables measuring adolescent school experience, measured ability, and adolescent attitudes, and some interesting and unexpected effects emerge. Once we control for adolescent variables, the effects of variables related to race/ethnicity reverse direction. That is, net of high school grades and other factors, both Blacks and Latinos appear to be slightly more likely than whites to attend college as adults. Unsurprisingly, controlling for high school factors substantially moderates the effect of parental education on enrollment; null effects are found for the children of all but college graduates, and even here the estimated effect size is halved. Considering that the influence of parental education largely operates through academic ability and orientation towards formal schooling, this is to be expected. However, what is not expected is that, after entering the vector of high school variables, the relationship between parental household income and hazard of enrollment becomes statistically significant and negative. It is, I believe, highly significant that this effect emerges in response to the inclusion of high school performance. In further analysis (not shown) in which variables were added one at a time, it was the inclusion of variables such as AFQT scores and high school grades which substantially lowered this coefficient. One potential interpretation is that less-academically inclined children of somewhat better-off families are able to utilize avenues to stable employment other than the school system – possibly family connections or friend networks.

In keeping with the predictions of the meritocratic perspective, individuals who earned higher high school grades and aptitude scores are more likely to re-enroll in school as adults. In a substantial result, the effect of high school disadvantage on enrollment is negative and significant at $p<.001$. That the effect of high school environment remains measurable on adult behavior, that is, at least seven years after leaving high school, and net of a set of other predictors, is rather surprising. The effect of dropping out of high school on the odds of re-enrollment is negative but not different from zero, which is unexpected given that controls for ever earning a GED or on-time graduation are not included. One suspects that the effect of dropout is captured in correlates to dropout, such as grades, aptitude, SES,
and disciplinary problems (the effect of which is also null). The effect of external locus of control on later use of higher education is negative, even though this variable was measured in adolescence. And interestingly, having held more traditional views on gender is also related to a lower probability of returning to college.

Table 4.3. Discreet-period event history models predicting enrollment in undergraduate education for adults aged 25 or older

<table>
<thead>
<tr>
<th></th>
<th>(1) Model 1</th>
<th>(2) Model 2</th>
<th>(3) Model 3</th>
<th>(4) Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1.158***</td>
<td>1.167***</td>
<td>1.141***</td>
<td>1.142***</td>
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<tr>
<td></td>
<td>(0.0373)</td>
<td>(0.0403)</td>
<td>(0.0404)</td>
<td>(0.0405)</td>
</tr>
<tr>
<td>Latino</td>
<td>0.987</td>
<td>1.115**</td>
<td>1.137***</td>
<td>1.139***</td>
</tr>
<tr>
<td></td>
<td>(0.0385)</td>
<td>(0.0496)</td>
<td>(0.0507)</td>
<td>(0.0509)</td>
</tr>
<tr>
<td>Black</td>
<td>0.923**</td>
<td>1.095*</td>
<td>1.096*</td>
<td>1.093*</td>
</tr>
<tr>
<td></td>
<td>(0.0336)</td>
<td>(0.0528)</td>
<td>(0.0548)</td>
<td>(0.0546)</td>
</tr>
<tr>
<td>Parental ed=HS</td>
<td>1.075*</td>
<td>1.007</td>
<td>1.013</td>
<td>1.018</td>
</tr>
<tr>
<td></td>
<td>(0.0445)</td>
<td>(0.0429)</td>
<td>(0.0429)</td>
<td>(0.0428)</td>
</tr>
<tr>
<td>Parental ed=some college</td>
<td>1.123**</td>
<td>1.031</td>
<td>1.035</td>
<td>1.042</td>
</tr>
<tr>
<td></td>
<td>(0.0582)</td>
<td>(0.0605)</td>
<td>(0.0613)</td>
<td>(0.0620)</td>
</tr>
<tr>
<td>Parental ed=bachelor’s/higher</td>
<td>1.308***</td>
<td>1.143**</td>
<td>1.152***</td>
<td>1.155***</td>
</tr>
<tr>
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<td>(0.0696)</td>
<td>(0.0627)</td>
<td>(0.0629)</td>
<td>(0.0632)</td>
</tr>
<tr>
<td>HH income (% of median)</td>
<td>0.982</td>
<td>0.945**</td>
<td>0.939**</td>
<td>0.937**</td>
</tr>
<tr>
<td></td>
<td>(0.0250)</td>
<td>(0.0248)</td>
<td>(0.0244)</td>
<td>(0.0244)</td>
</tr>
<tr>
<td>Single parent family</td>
<td>1.049</td>
<td>1.066</td>
<td>1.057</td>
<td>1.057</td>
</tr>
<tr>
<td></td>
<td>(0.0507)</td>
<td>(0.0538)</td>
<td>(0.0545)</td>
<td>(0.0544)</td>
</tr>
<tr>
<td>HS dropout</td>
<td>0.928</td>
<td>0.904</td>
<td>0.904</td>
<td>0.904</td>
</tr>
<tr>
<td></td>
<td>(0.0566)</td>
<td>(0.0564)</td>
<td>(0.0560)</td>
<td>(0.0560)</td>
</tr>
<tr>
<td>HS grades</td>
<td>1.055**</td>
<td>1.051**</td>
<td>1.050**</td>
<td>1.050**</td>
</tr>
<tr>
<td></td>
<td>(0.0247)</td>
<td>(0.0251)</td>
<td>(0.0249)</td>
<td>(0.0249)</td>
</tr>
<tr>
<td>HS disadvantage</td>
<td>0.934***</td>
<td>0.931***</td>
<td>0.933***</td>
<td>0.933***</td>
</tr>
<tr>
<td></td>
<td>(0.0237)</td>
<td>(0.0234)</td>
<td>(0.0231)</td>
<td>(0.0231)</td>
</tr>
<tr>
<td>AFQT</td>
<td>1.005***</td>
<td>1.006***</td>
<td>1.006***</td>
<td>1.006***</td>
</tr>
<tr>
<td></td>
<td>(0.000936)</td>
<td>(0.000939)</td>
<td>(0.000939)</td>
<td>(0.000939)</td>
</tr>
<tr>
<td>HS disciplinary problems</td>
<td>1.019</td>
<td>1.004</td>
<td>1.005</td>
<td>1.005</td>
</tr>
<tr>
<td></td>
<td>(0.0480)</td>
<td>(0.0471)</td>
<td>(0.0469)</td>
<td>(0.0469)</td>
</tr>
<tr>
<td>Traditional gender</td>
<td>0.954**</td>
<td>0.954**</td>
<td>0.955**</td>
<td>0.955**</td>
</tr>
<tr>
<td></td>
<td>(0.0208)</td>
<td>(0.0206)</td>
<td>(0.0205)</td>
<td>(0.0205)</td>
</tr>
<tr>
<td>External locus of control</td>
<td>0.988*</td>
<td>0.989*</td>
<td>0.988*</td>
<td>0.988*</td>
</tr>
<tr>
<td></td>
<td>(0.00663)</td>
<td>(0.00654)</td>
<td>(0.00648)</td>
<td>(0.00648)</td>
</tr>
<tr>
<td>Never married</td>
<td>1.035</td>
<td>1.041</td>
<td>1.041</td>
<td>1.041</td>
</tr>
<tr>
<td></td>
<td>(0.0478)</td>
<td>(0.0478)</td>
<td>(0.0478)</td>
<td>(0.0478)</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>1.041</td>
<td>1.039</td>
<td>1.041</td>
<td>1.041</td>
</tr>
<tr>
<td></td>
<td>(0.0486)</td>
<td>(0.0484)</td>
<td>(0.0486)</td>
<td>(0.0484)</td>
</tr>
<tr>
<td>Widowed</td>
<td>1.733***</td>
<td>1.686***</td>
<td>1.686***</td>
<td>1.686***</td>
</tr>
<tr>
<td></td>
<td>(0.294)</td>
<td>(0.281)</td>
<td>(0.294)</td>
<td>(0.281)</td>
</tr>
<tr>
<td>Job loss (lag)</td>
<td>1.167***</td>
<td>1.163***</td>
<td>1.163***</td>
<td>1.163***</td>
</tr>
<tr>
<td></td>
<td>(0.0521)</td>
<td>(0.0519)</td>
<td>(0.0519)</td>
<td>(0.0519)</td>
</tr>
</tbody>
</table>
Next, I enter a vector of time-varying covariates. In these pooled-gender analyses, divorce does not increase the odds of enrollment relative to being married; nor does never having been married. But being widowed increases the hazard rate by nearly 75%. Having very young children reduces the odds of returning to school, net of other factors, by 19% (relative to having no children). But having slightly older children increases the odds slightly (by 7%) and having a child 18 or older raises them substantially (by 24%). This strongly suggests enrollment by individuals who felt forced to delay their education upon having children, but may also reflect a desire to ‘model’ school attainment for children. Losing one’s job...
in the prior year increases the odds of enrollment by 17%, net of other factors. This supports the notion that at least some adult re-enrollment occurs as a response to economic insecurity.

Finally, in Model 4, I add contextual economic variables. The rate of change in GDP is negatively related to the odds of enrollment, as enrollment increases in recessionary years, and falls in boom years when wages are rising. Similarly, the rate of economic return to a college degree positively predicts enrollment, and its inclusion reduces the coefficient on the linear trend variable to non-significance. This suggests that an increasing return to a college degree “explains” the upward net trend in enrollment over time for this cohort. The negative relationship between the unemployment rate and re-enrollment is the opposite of what is expected, and not explained by the simultaneous inclusion of the lagged GDP growth rate, for the negative relationship remains when this variable is removed and the two variables are only correlated (negatively) at $r=-.35$. In fact, it is more highly correlated (negatively) with the college wage premium, and when that variable is removed the sign on the unemployment rate variable reverses.

**Differences by Gender**

The prior table established that the incidence of adult undergraduate participation varies substantially by gender. In Table 4.4 I investigate whether the correlates of enrollment vary by gender as well. What is perhaps most striking is how the effect of SES varies by gender. Among males, there is a strong monotonic effect of parental education on the probability of enrollment, but net of other factors no such relationship is observed for females. Meanwhile, the negative relationship between parental household income and the odds of college participation identified in the prior table is revealed here to be confined solely to males. This strongly suggests the use of non-school related job networks in order to secure a living by slightly better off, academically disinclined males. It is also interesting to note
that while Latinos appear to be more likely to enroll in college than whites regardless of gender, the difference between African-Americans and whites is statistically significant only among females.

Academic variables and measured aptitude have similar effects on males and females, but the depressive effect of high school environment is sharper (and statistically distinguishable from zero) among females. This is suggestive of findings that changes in neighborhood environments seem to impact females more than males (Kling, Liebman & Katz 2007). There is also an unexpected gender difference in the impact of holding traditional gender beliefs – it is negative for both genders, but larger and statistically distinguishable from zero for males only.

Moving to the time-varying covariates, the reason for the null effect of being divorced in pooled models becomes clear: the effect is significant and positive among females but significant and negative among males. This could suggest that, perhaps, during marriage some women are prevented from enrolling in college by responsibilities inhering in gender-based household roles, while some males were abetted in so doing. Meanwhile the impact of widowhood is positive and of near-identical for both genders. Having a young child reduces the odds of enrollment for both men and women, but among females alone is there a positive impact associated with having a slightly older child relative to no children.

The effect of involuntary job loss is positive and statistically significant for both males and females, but slightly stronger for women. Investigating this further, in separate models (not shown) I included a different specification for unemployment – any period of unemployment, rather than unemployment deriving from involuntary job loss. Here the effects are also significant for both genders, but the magnitude difference is reversed. A potential explanation of this might be that a fair proportion of women who experience an unemployment spell are doing so for reasons of strategic household planning – leaving the labor force to principally raise children – or are more able to depend on spousal
support. Alternatively, it is possible that males are less willing than females to identify a period of job loss as having been the result of being fired or laid off rather than arising due to their own volition.

Table 4.4. Event history models predicting college enrollment separately by gender

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>1.175***</td>
<td>1.175**</td>
</tr>
<tr>
<td></td>
<td>(0.0650)</td>
<td>(0.0827)</td>
</tr>
<tr>
<td>Black</td>
<td>1.148**</td>
<td>1.089</td>
</tr>
<tr>
<td></td>
<td>(0.0658)</td>
<td>(0.0844)</td>
</tr>
<tr>
<td>Parental ed=HS</td>
<td>0.938</td>
<td>1.192***</td>
</tr>
<tr>
<td></td>
<td>(0.0485)</td>
<td>(0.0813)</td>
</tr>
<tr>
<td>Parental ed=some college</td>
<td>0.876*</td>
<td>1.340***</td>
</tr>
<tr>
<td></td>
<td>(0.0595)</td>
<td>(0.123)</td>
</tr>
<tr>
<td>Parental ed=bachelor’s/higher</td>
<td>0.926</td>
<td>1.490***</td>
</tr>
<tr>
<td></td>
<td>(0.0686)</td>
<td>(0.121)</td>
</tr>
<tr>
<td>HH income (% of median)</td>
<td>1.005</td>
<td>0.864***</td>
</tr>
<tr>
<td></td>
<td>(0.0304)</td>
<td>(0.0386)</td>
</tr>
<tr>
<td>Single parent family</td>
<td>0.946</td>
<td>1.132*</td>
</tr>
<tr>
<td></td>
<td>(0.0537)</td>
<td>(0.0843)</td>
</tr>
<tr>
<td>HS dropout</td>
<td>0.907</td>
<td>0.988</td>
</tr>
<tr>
<td></td>
<td>(0.0748)</td>
<td>(0.0901)</td>
</tr>
<tr>
<td>HS grades</td>
<td>1.043</td>
<td>1.045</td>
</tr>
<tr>
<td></td>
<td>(0.0344)</td>
<td>(0.0342)</td>
</tr>
<tr>
<td>HS disadvantage</td>
<td>0.925**</td>
<td>0.950</td>
</tr>
<tr>
<td></td>
<td>(0.0293)</td>
<td>(0.0372)</td>
</tr>
<tr>
<td>AFQT</td>
<td>1.005***</td>
<td>1.007***</td>
</tr>
<tr>
<td></td>
<td>(0.00121)</td>
<td>(0.00138)</td>
</tr>
<tr>
<td>HS disciplinary problems</td>
<td>1.037</td>
<td>1.003</td>
</tr>
<tr>
<td></td>
<td>(0.0588)</td>
<td>(0.0710)</td>
</tr>
<tr>
<td>Traditional gender</td>
<td>0.961</td>
<td>0.940*</td>
</tr>
<tr>
<td></td>
<td>(0.0270)</td>
<td>(0.0302)</td>
</tr>
<tr>
<td>External locus of control</td>
<td>0.996</td>
<td>0.983</td>
</tr>
<tr>
<td></td>
<td>(0.00762)</td>
<td>(0.0106)</td>
</tr>
<tr>
<td>Never married</td>
<td>1.020</td>
<td>1.021</td>
</tr>
<tr>
<td></td>
<td>(0.0519)</td>
<td>(0.0747)</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>1.155***</td>
<td>0.820**</td>
</tr>
<tr>
<td></td>
<td>(0.0638)</td>
<td>(0.0668)</td>
</tr>
<tr>
<td>Widowed</td>
<td>1.748***</td>
<td>0.179*</td>
</tr>
<tr>
<td></td>
<td>(0.296)</td>
<td>(0.173)</td>
</tr>
<tr>
<td>Job loss (lag)</td>
<td>1.206***</td>
<td>1.138*</td>
</tr>
<tr>
<td></td>
<td>(0.0704)</td>
<td>(0.0783)</td>
</tr>
<tr>
<td>Child 0-5</td>
<td>0.813***</td>
<td>0.794***</td>
</tr>
<tr>
<td></td>
<td>(0.0497)</td>
<td>(0.0486)</td>
</tr>
<tr>
<td>Child 6-10</td>
<td>1.150**</td>
<td>0.948</td>
</tr>
<tr>
<td></td>
<td>(0.0728)</td>
<td>(0.0971)</td>
</tr>
<tr>
<td>Child 11-18</td>
<td>0.992</td>
<td>1.217</td>
</tr>
<tr>
<td></td>
<td>(0.0739)</td>
<td>(0.146)</td>
</tr>
<tr>
<td>Adult child</td>
<td>1.130</td>
<td>1.059</td>
</tr>
<tr>
<td></td>
<td>(0.125)</td>
<td>(0.191)</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient 1</td>
<td>Coefficient 2</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Unemployment rate (lag)</td>
<td>0.959**</td>
<td>0.927***</td>
</tr>
<tr>
<td>Return to college (lag)</td>
<td>2.838</td>
<td>2.019</td>
</tr>
<tr>
<td>GDP growth (lag)</td>
<td>0.967***</td>
<td>0.966**</td>
</tr>
<tr>
<td>Age</td>
<td>0.976</td>
<td>0.833***</td>
</tr>
<tr>
<td>Age²</td>
<td>1.000</td>
<td>1.002**</td>
</tr>
<tr>
<td>Lagged enrollment</td>
<td>2.493***</td>
<td>2.539***</td>
</tr>
<tr>
<td>Years out of school</td>
<td>0.681***</td>
<td>0.637***</td>
</tr>
<tr>
<td>Years out of school²</td>
<td>1.017***</td>
<td>1.022***</td>
</tr>
<tr>
<td>Years out of school³</td>
<td>1.000***</td>
<td>1.000***</td>
</tr>
<tr>
<td>Prior enrollments</td>
<td>1.061***</td>
<td>1.079***</td>
</tr>
<tr>
<td>Year</td>
<td>0.982</td>
<td>1.007</td>
</tr>
<tr>
<td>Observations</td>
<td>84,930</td>
<td>84,993</td>
</tr>
<tr>
<td>Groups</td>
<td>3790</td>
<td>3810</td>
</tr>
</tbody>
</table>

Source: NLSY79; *p<.05, **p<.01, ***p<.001

Differences by Age at First Postsecondary Enrollment

It is possible that the factors which predict college enrollment among ‘returning students’ - those who have previously attended and left with an incomplete degree – and those who could enroll for the first time as adults are different. In Table 4.5 I investigate this possibility. The sample size for the latter group is twice as large – a fact which must be taken into account when interpreting differential statistical significance of similarly-sized coefficients – because non-college individuals are included in this analysis as well as late enrollers.

Though results are broadly similar for the two groups, there are some interesting differences. The effect of gender, though statistically significant for both groups, is much larger among those who never enrolled prior to 25, as is the difference in enrollment probability between Latinos and whites.
Among those who never enrolled before 25, greater parental education is monotonically related to higher enrollment probability, though statistical significance is attained only for the contrast between those whose parents completed college versus those whose parents did not complete high school. There is no such pattern among those who enrolled before 25. Also, the negative effect of household income appears only for the potential late enrollers.

Though the effect of higher measured aptitude is similar for both groups, better high school grades appear only to be influential among those who previously enrolled. That is, among individuals who enroll in “traditional” ages but do not complete, those with worse academic records in high school are less likely to return. This may indicate that those who had worse grades in high school interpreted their initial unsuccessful college attempt as “confirming” their disinclination towards or lack of capacity for further schooling.

Time-varying influences have similar effects among both groups. In both groups, young children lower the probability of enrollment, and job loss increases it (though the effect is statistically significant only among prior enrollers). The major difference here relates to marital status. Becoming widowed more than doubles the likelihood of returning to school among those who were previously enrolled, but has little effect on those who have never before been to college.
Table 4.5. Event history models predicting enrollment in college enrollment separately by age at first postsecondary enrollment

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>First enrollment before 25</th>
<th>Never enrolled before 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1.072* (0.0441)</td>
<td>1.396*** (0.0982)</td>
</tr>
<tr>
<td>Latino</td>
<td>1.074 (0.0526)</td>
<td>1.359*** (0.121)</td>
</tr>
<tr>
<td>Black</td>
<td>1.104* (0.0619)</td>
<td>1.109 (0.107)</td>
</tr>
<tr>
<td>Parental Ed=HS</td>
<td>0.975 (0.0472)</td>
<td>1.038 (0.0782)</td>
</tr>
<tr>
<td>Parental Ed=Some College</td>
<td>0.985 (0.0646)</td>
<td>1.112 (0.127)</td>
</tr>
<tr>
<td>Parental Ed=BA+</td>
<td>1.092 (0.0648)</td>
<td>1.284** (0.162)</td>
</tr>
<tr>
<td>HH Income (% of median)</td>
<td>0.968 (0.0293)</td>
<td>0.867*** (0.0466)</td>
</tr>
<tr>
<td>Single Parent Family</td>
<td>1.067 (0.0628)</td>
<td>1.031 (0.112)</td>
</tr>
<tr>
<td>HS Dropout</td>
<td>0.963 (0.0745)</td>
<td>0.886 (0.0704)</td>
</tr>
<tr>
<td>HS grades</td>
<td>1.079*** (0.0301)</td>
<td>0.969 (0.0418)</td>
</tr>
<tr>
<td>HS disadvantage</td>
<td>0.916*** (0.0263)</td>
<td>0.968 (0.0468)</td>
</tr>
<tr>
<td>AFQT</td>
<td>1.002** (0.000993)</td>
<td>1.012*** (0.00178)</td>
</tr>
<tr>
<td>HS disciplinary problems</td>
<td>1.029 (0.0553)</td>
<td>1.018 (0.0784)</td>
</tr>
<tr>
<td>Traditional gender</td>
<td>0.975 (0.0232)</td>
<td>0.910** (0.0401)</td>
</tr>
<tr>
<td>External locus of control</td>
<td>0.982** (0.00766)</td>
<td>0.993 (0.0114)</td>
</tr>
<tr>
<td>Never married</td>
<td>1.058 (0.0567)</td>
<td>0.992 (0.0882)</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>1.022 (0.0602)</td>
<td>1.098 (0.0786)</td>
</tr>
<tr>
<td>Widowed</td>
<td>2.046*** (0.438)</td>
<td>1.282 (0.329)</td>
</tr>
<tr>
<td>Job loss (lag)</td>
<td>1.158*** (0.0610)</td>
<td>1.130 (0.0963)</td>
</tr>
<tr>
<td>Child 0-5</td>
<td>0.847*** (0.0410)</td>
<td>0.746*** (0.0725)</td>
</tr>
<tr>
<td>Child 6-10</td>
<td>1.078 (0.0745)</td>
<td>1.104 (0.103)</td>
</tr>
<tr>
<td>Child 11-18</td>
<td>1.126 (0.104)</td>
<td>0.962 (0.101)</td>
</tr>
<tr>
<td>Adult child</td>
<td>1.141 (0.151)</td>
<td>1.120 (0.146)</td>
</tr>
<tr>
<td>Unemployment rate (lag)</td>
<td>0.962** (0.0170)</td>
<td>0.919*** (0.0288)</td>
</tr>
<tr>
<td>Return to college (lag)</td>
<td>2.170 (0.320)</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

For adults, enrolling in college is a complex process, and it is influenced by a wide variety of factors. This research has confirmed that an interplay of background and of contemporaneous factors lead individuals who reach age 25 without a bachelor’s degree to enroll in higher education. It has generally been believed that it is relatively privileged and academically able adults who are more likely to attend college, and this research finds some confirmation for this. Adults are overall more likely to enroll if they have more highly educated parents, if their measured cognitive ability is higher, and if their high school grades were higher, they are more likely to return to schooling. But in other ways, among adults, higher education appears to be more heavily relied upon by adults who have fewer advantages in the labor market: minorities, women, and among males, individuals from lower-income family backgrounds. With the exception of gender-effects, these differences only appear once cognitive test scores and academic background have been controlled.
What are we to make of this? First, it is important to recall that the sample included in this analysis has already been subjected to a kind of “reverse creaming”. Individuals who earn their bachelor’s degrees before 25 were excluded by definition, and those left over after this crucial round of social selection represent a generally poorer, less academically prepared subset of their cohorts. What was presented and analyzed in this chapter, then, was a later round of self-selection into higher education. Among some portion of non-baccalaureate adults, higher education may have been seen as a secondary option, with orientation to the labor market being primary. Such individuals would tend to enter higher education to the extent that the labor market fails to deliver according their needs, desires, or expectations. Education is highly consequential on the labor market, but among those without college degrees there are other means of securing remunerative employment. Network connections through family and friends can lead to relatively well-paying jobs, and individuals are more likely to have such contacts if they are from better-off families and communities as a whole (Lin, Ensel & Vaughn 1981). It is quite likely that whites and males tend to have greater access to stable, decently-paying blue collar employment than minorities and females (Royster 2003). This also may have been truer in the era when the NLSY79 cohort came of age – the mid-1980s – than it is today.

The debate between meritocracy and social reproduction in higher education thus finds another wrinkle. There is plentiful evidence that socioeconomic privilege improves substantially one’s likelihood of earning educational credentials, especially when we attempt to identify the full effect of class privilege including as it works through one’s own academic preparation and performance. But among more marginal students, those who are on the boundary of participation in higher education, those lacking resources seem to be more likely to make use of the educational system. For this sub-population, this suggests that the educational system may be perceived as more open and meritocratic than the non-college labor market (England 2005; McDonald, Lin & Ao 2009; Royster 2003).
This study also points to the surprising tenacity of high school academic experiences on adult enrollment behavior. Though it is not surprising that high school grades and cognitive scores are predictive of re-enrollment, that the contextual disadvantage encountered in one’s high school is related to lower odds of enrollment, net of individual academic performance, cognitive ability, race, gender, or SES is unexpected. I suggest two explanations for this. First, this may be evidence of omitted variable bias, and in particular of missing variables related to residential disadvantage. Research has generally found that poverty in one’s neighborhood has a negative impact on educational outcomes net of individual characteristics, though few studies simultaneously estimate the effect of both neighborhood and school environment (Ainsworth 2002; Harding 2003). Another possible explanation is that there are indeed residual effects of attending a disadvantaged school on one’s inclination to return to school as an adult. This could take to form of a “scarring” effect in which students who experienced schooling as distasteful or traumatic are unwilling to return, or could be the result of a subtler process through which prevalent life-course norms were inculcated in the school and peer cultures, norms which downplay schooling as an option.

Finally, this study underscores the effects of insecurity in the labor market in pushing adults back to schooling. Net of other factors, it appears that a job loss can spur college-going, and that the college enrollment is also more common in recessionary years. There is a tendency for scholars and policymakers to regard educational participation as something like an unalloyed good, and to view going to college as a healthy response to losing one’s job. But this overlooks the possibility that in some cases participation in higher education is may be a symptom and effect of the increasingly unforgiving labor market faced by those lacking college credentials. In this context, we should ask whether higher education ought to be seen as offering opportunity, or as one of a small number of possible escapes from a deteriorating situation. Researchers and policymakers sometimes bemoan the appearance on college campuses of those who are “not really ready for college”, but in the context of a punishing labor
market, what other choice do these individuals have? Opportunities for earning a stable, decent living without a college degree have evaporated over recent decades, and college, especially college in the open-admission sector, may appear more as way to have a fighting chance at a secure livelihood rather than as a potential means of \textit{upward} mobility.

Finally, this analysis has underscored both differences and similarities between males and females in terms of the impact of life events on school enrollment. Both men and women were more likely to enroll in college following an involuntary job loss, and in times of slower economic growth. They were also substantially less likely to enroll when raising small children. However, women responded positively to marital dissolution in terms of college enrollment, while men became less likely to attend. Also, women were more likely to engage in higher education once their children reached school age. The former finding suggests either that marriage as an institution can act to constrain the educational ambitions of women while enabling those of men. It may also indicate that some women respond to the reduction of household income which follows a divorce by attending college, while some men respond by intensifying a commitment to the labor market. The latter suggests that women were more likely to have delayed their desire to partake of higher education while raising small children, and that they take advantage of the relative increase in available time once children enter elementary school to do so.

These are, of course, aggregate patterns, and can only suggest why it is that individuals decide to enroll. To explore enrollment decisions in more detail, and to put them in context, qualitative data from the life-histories of adult undergraduates is required, and it is this to which I turn in the next chapter.
Chapter 5

Second Chances, Last Chances, and Life Rafts: Motives for “Going Back to School”

As we have seen, attending college is not an uncommon thing for adults to do. More than 7.2 million adults over 25 were enrolled in college in 2012 – accounting for two of every five undergraduates. My estimates using the NLSY-1979 suggest that 30.5% of adults who make it to 25 without a bachelor’s degree enroll in higher education at some point subsequently. And the individuals in that study were born in the early 1960s; one suspects that the figure is higher in more recent cohorts.

But why do adults go “back to school”? As discussed previously, the answer is both simple and complicated. On the one hand, there are substantial gains to be had by raising one’s educational profile. The economic return to a bachelor’s degree is substantial and has risen sharply over recent decades (Goldin & Katz 2009). Having a college degree is associated with lower odds of unemployment (Farber 2003) and with greater access to crucial benefits like employer-provided health insurance and paid vacation time (see Chapter 6). There are non-material benefits as well; research has shown that the college educated have lower levels of stress and depression, better health, and a longer life expectancy (Cutler & Lleras-Muney 2006; Hout 2012). College graduates are more likely to be married and less likely to see their marriages end in divorce (Isen & Stevenson 2010). Finally, research suggests that earning a college degree has substantial beneficial impacts on one’s offspring, lowering their likelihood of exposure to poverty, improving their health, and raising the odds of their own success in school (Attewell & Lavin 2007).

But at the same time, the odds are in some ways always against any particular adult making the decision to enroll in college, for college participation runs against the grain of the rest of adult life – or, put another way, adult life is a difficult fit for what colleges expect out of their students. Adults are given next to no assistance in choosing a college, applying to school, or in obtaining financial aid.
Compared with younger would-be enrollers, who are positively pressured if need be into enrolling, they receive little if any encouragement, and indeed may encounter discouragement from employers, family members, or friends (James 1995; Suitor 1988). They must re-enter the student role, which they have not inhabited for years (Tones, et al. 2009), and tap skills-sets which they worry may have grown rusty (Richardson 1994)\(^9\). Moreover, they must fit the demands of school into lives already crowded with stubbornly insistent responsibilities (Edwards 1993; Gigliotti & Huff 1995; Leese 2010). Going to college school is simply more awkward and exacting for adults, because the world they inhabit presumes that they will not be doing such a thing.

The previous chapter provided some very broad indications of what might lead adults to enroll and what might inhibit them from so doing. In this chapter, I explore enrollment decisions in more depth using data collected from in-depth interviews with thirty-six adult undergraduates. A number of themes emerged from these interviews which were relevant to the decision to enroll, including dissatisfaction with poor or declining wages and working conditions, the importance of internalized life-calendars, the influence of cultural presumptions equating individual intelligence and worth with college completion, and a desire to role model educational attainment for one’s children.

**Prior Research**

There are two streams of research on the decision by adults to enroll in higher education. First, there is a quantitative literature (reviewed in Chapter 4) in which the probability of enrollment is modeled as a function of both invariant background characteristics and the occurrence of external events. Reasons for enrollment are deduced from patterns of coefficients of variables found to impact (positively or negatively) the odds of return. Thus, in such work, individual attributes and context alone

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\(^9\) Though adults worry their skills having declined, these fears seem to be groundless. Richardson (1994) finds no support for the existence of age-related educational deficits among adult students, and Trueman & Hartley (1996) found that in general adults had better, not worse, time-management skills than younger students.
are considered as impacting the enrollment decision, and context is generally not able to be very subtly portrayed or exactly measured.

The second strain of research – and it is a rather thin strain - presents broad and general self-reported reasons for college participation. So, for example, we learn that most adults report going to school for job-related reasons (Aslanian 2001; Cross 1981; Reay, Ball & David 2002), which is unsurprising given that occupational goals and aspirations are involved in motivating the enrollment of most traditionally-aged students as well (Katchadourian 1985; Moffatt 1984; Mullen 2010). But for adults, concrete labor market experiences, such as losing a job or missing a promotion, often make clear the need for a higher credential (Kasworm 2003). Some adult students enroll out of a belief that earning a credential will raise their level of social prestige or will enable them to be accepted within more educated social circles (Kasworm & Blowers 1994; Quinnan 1997). Wolfgang & Dowling (1981) find that, compared with traditionally-aged students, adult students are more motivated by intellectual interest in subject matter and less motivated by social concerns, which is consistent with Bean & Metzner’s (1985) model of nontraditional student enrollment. Other studies identify desires to “give back” to the community and to be an educational role model for one’s children (Suitor 1988; Reay, Ball & David 2002). While these studies have the strength of acknowledging the importance of individuals’ thoughts, they mostly do so at the price of decontextualizing them. Material contexts, life histories, conceptions of personal identity, presumed and planned life trajectories, and situation in social networks are, with rare exception, absent from such accounts60. Further, the motives themselves are generalized to the point of banality. “Career advancement” and “desire to learn” are goals to which nearly anyone can claim subscription; they tells us little about what leads certain people to enroll in college at the precise moment that they do.

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60 Prominent exceptions to this pattern are Edwards (1993), Kasworm and Blowers (1994), and Quinnan (1997)
Thus there is a set of studies which investigate context without cognition; and we have another set of studies which measure the prevalence of general motives without context. Clearly, neither approach is satisfactory. A fuller depiction is required which relates stated motives to the lives and circumstances of the individuals articulating these motives. Such an inquiry will take into account not simply a person’s contemporary situation, but also their past experiences. It will highlight the importance of self-understanding in relation to both their present project of education and also the identity they are projecting into the future.

**Data and Methods**

In this chapter, I draw upon in-depth interviews with adult undergraduates. Recruitment and interview procedures were already discussed in Chapter 2 and are detailed in Appendix 1, so I will not discuss them depth at present.

*Sample Characteristics: Reasons for Enrolling in College*

As mentioned in Chapter 2, prior to interviewing subjects I administered a questionnaire which, among other things, contained attitudinal questions regarding motivations for going to college and beliefs relevant to the enrollment decision. Respondents were provided with a list of statements and asked to indicate agreement with the statement.

Results appearing in Table 5.1 concur with prior research indicating the centrality of economic motivations, broadly defined, for adult attendance. Virtually all respondents reported that the desire for a better job played a role in their enrollment decision. Two-thirds said their desired job required a bachelor’s degree, and large majorities expected a different job and higher pay upon completion. Economic motivation is also suggested by the fact that 83% agreed that it is now difficult to obtain a “good job” without a college degree, and that 50% reported recent financial struggles. But non-
economic motives are also apparent; majorities report being motivated by the desire to learn (71%) and by the feeling of accomplishment that will follow upon completion (77%).

Table 5.1. Attitudinal response data relevant to college enrollment (N=36)

<table>
<thead>
<tr>
<th>Reason for enrollment</th>
<th>Percent in agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for enrollment: better job</td>
<td>94%</td>
</tr>
<tr>
<td>Reason for enrollment: interest in learning</td>
<td>71%</td>
</tr>
<tr>
<td>Reason for enrollment: pride in accomplishment</td>
<td>77%</td>
</tr>
<tr>
<td>Difficult to get good job without BA</td>
<td>83%</td>
</tr>
<tr>
<td>Struggled to make ends meet recently</td>
<td>50%</td>
</tr>
<tr>
<td>My desired job requires BA</td>
<td>64%</td>
</tr>
<tr>
<td>Family supports my enrollment in school</td>
<td>83%</td>
</tr>
<tr>
<td>Family helps me in enrollment in school</td>
<td>72%</td>
</tr>
<tr>
<td>Family responsibilities interfere with school</td>
<td>33%</td>
</tr>
<tr>
<td>Job responsibilities interfere with school</td>
<td>33%</td>
</tr>
<tr>
<td>Finishing school is my top priority</td>
<td>81%</td>
</tr>
<tr>
<td>College services make it easier for me</td>
<td>22%</td>
</tr>
<tr>
<td>College is harder for older person</td>
<td>61%</td>
</tr>
<tr>
<td>Faculty prefer to teach younger students</td>
<td>0%</td>
</tr>
<tr>
<td>Expect more money after degree</td>
<td>78%</td>
</tr>
<tr>
<td>Expect different job after degree</td>
<td>86%</td>
</tr>
</tbody>
</table>

Respondents reported little school-life conflict, which is surprising given the extent of family and work responsibilities (see Chapter 2, Table 2.1). Only a third of respondents reported work or family getting in the way of completing school individually (although closer investigation reveals that 50% indicated a conflict with one or the other), and most described their family both as supportive of their enrollment and as providing some kind of assistance. While this may reflect wishful thinking or social desirability bias, it contrasts intriguingly with a prominent theme in research on adult students which foregrounds the stress and resultant conflicts of managing multiple roles (Edwards 1993; Home 1998; James 1995; Reay 2002; Suitor 1988).
Interpretive Analytic Strategy

I do not attempt, in what follows, an exhaustive enumeration of reasons for adults’ enrollment in college. To do so would result simply in a long list of conscious motives shorn of context which would contribute little to the present state of knowledge on adult college-going. Nor will I attempt, for individual respondents, to characterize their enrollment decision in its full complexity. Most respondents explained their enrollment through reference to highly individualized constellations of history, motive and circumstance, forming totalities which are of interest from an ideographic perspective but are something other than what I wish to focus on in this chapter. I instead opt to read across the set of interview texts, identifying common threads, patterns and themes which seem to be of particular relevance and interest. This process was iterative, with an initial set of codes subjected to repeated revision as I read multiple times through the interviews texts. This involves, perhaps, a high degree of authorial intervention in the data, far more selection and interpretation than other strategies. It is, however, fairly standard in the production of qualitative empirical sociology, echoing the practices of grounded theory (Glaser & Strauss 1967).

The result, as in Chapter 2, is a somewhat loose, impressionistic account of reasons for adult college-going. Subsections cover prominent themes which emerged in the interviews, and I draw selectively on specific interviews for elaboration.

Findings

Economic Factors Contributing to the Return to School

Chapter 2 established that economic factors were implicated in delay and drop-out decisions somewhat less frequently than expected. Economic rationales figured prominently, however, in

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61 Initial codes were arrived at by reference to my memories of the interviews themselves, and to some degree suggested by a priori research questions and hypotheses which informed the questions I asked during interviews. See Appendix 1 for more details.
subjects’ narratives of their decision to enroll in college. As indicated above, most interviewees believed
that a college education is now a virtual pre-requisite for obtaining a “good” job. This belief was not
universally held, however, and a few respondents reported holding jobs they found to be quite
acceptable prior to their most recent enrollment. But most of those that I interviewed had labor market
experiences restricted to low-level positions in the retail, health and food service sectors, and felt that
they would be confined to such jobs unless they earned a college degree. Many also endured layoffs
and bouts of unemployment, particularly after the onset of the recession of 2007-2009.

Working conditions in retail were in particular described as poor. As one respondent related,

Retail will make you change your whole outlook on life. You know, coming home late,

waking up early and then not getting enough hours... I was working part time under 20

hours, so you are making 20 hours or less. You are fighting for hours just to make ends

meet and you can’t make ends meet with $9 an hour working 15 hours a week. That

just doesn’t work. There was a time where they gave me 4 hours a week and there is

nothing I could do about it because that’s my status, part time doing 20; I had to take

that or nothing ....If I had my degree and I went to a field where I was making enough

money I wouldn’t be going through these things.

Ramon Salcedo’s experience is worth exploring at length in this regard. He had dropped out of
high school and earned his GED in the early 1990s and for a time found only low-wage jobs such as
messengering and security. After taking an office skills course at his girlfriend’s suggestion, he found
steady temporary office work during the boom years of the late 1990s. This, he says, “dried up after
9/11”. He found his way to managing a retail outlet for a cellular phone company, a role which he says
earned him “upper five figures, not bad for a guy with a GED.” But he reports that after the financial
crisis, the company took advantage of a weaker labor market to worsen working conditions:
The makeup of the stores at the time... the typical salesman was like an adult who had a house, own apartment, two cars. Like it was like a man’s job - by man I mean man, woman, adult, you know, an adult job. After the recession they decided to change their structure and kind of make it more like other retail places: hire young, don’t pay much, that kind of stuff.... They changed rules; they changed regulations; they made things strict; they took away for example chairs and desks. They put in uniforms where [previously] as long as you dressed business-casual you were good-to-go... We used to hire cleaning companies, and now you have to clean your own store.

The commission structure was altered such that it became more difficult to make a good salary, and this along with worsened working conditions led older workers to quit. Ramon was instructed to replace departing workers with part-time employees, which he believes was an attempt to secure a labor force that would be younger, cheaper, and more docile. After these changes had been implemented, “then they started to turning on the managers. And when I saw that I was like, ‘I’m out of here’”. He quit his job and tried to find one with better working conditions, but found that conditions had declined at other retail outlets as well:

At that point what happened at [cellular company] had happened to all these retail companies, most if not all of them... And I would leave these jobs. It is not that they were like firing me but it was just I could not acclimate. And then after a few years of that, it was just kind of like what the hell am I going to do? I decided I gotta go back to school and so here we are.

Other respondents trace their decision to enroll to being passed over for a job or a promotion.

According to one:
I was temping and it came down to the end of the assignment, and the manager had to pick somebody to stay, and she picked another girl because she had an Associate Degree. And that got me so mad, even though I was like ten times a better worker, I had way more experience. She was always late; I was always there on time. And it just, I was so mad that I was like, you know what? I am going to go to school. And after that, the next day I went and registered.

Direct experiences such as this were more dramatic versions of a more general phenomenon in which the labor market advantage of a bachelor’s degree was more indirectly communicated. Many respondents reported seeing advertisements for jobs which they wanted but which required a college degree, or knowing people who were turned down for jobs or promotions because they lacked a college education. Respondents also contrasted their own experiences with those of their college-educated acquaintances. Ramon’s wife, for instance, has a degree and a steady, stable job working for a university:

She is a student adviser at a college and she works very, very hard and sometimes it fluctuates but there is always that level of professionalism, you know? You know we trade stories and I am like yeah, you know, that’s how we should be. You know nothing is perfect, we are human beings, we make mistakes, you are going to run into an asshole, you are going to have an asshole boss sometimes but I mean you can kind of quantify into degrees of - because she (his wife) has a fucking bachelors from [ivy league college] she can be like, oh, fuck it.

At his wife’s workplace he perceives a prevailing work culture in which employees are granted a base level of respect. This respect is, he believes, a function of the labor market power of college-educated workers, who if not treated appropriately can easily find other positions. It was precisely this
sort of respect that disappeared from his sales job in the wake of the Great Recession because of a “shift” in labor market power in favor of employers. As a result, employers could now demand bachelor’s degrees for jobs that previously did not require them:

Reason B that I came back to school, a lot of those jobs that were, that I was able to get just by stepping my foot out of the door now require a bachelors. Because of the shift - we’ve shifted! So you know because those jobs, you know, for the most part you will be all right. You know what I mean? But you need at least your two or your four, whatever.

Ramon believes that changes in the labor market presented him with a fateful choice. He could either accept a much worse job at much lower wages, or he could improve his prospects by enrolling in college – which he considers the “more pragmatic” of the two options. It is important to note that for workers like Ramon, college is not seen as a means of upward mobility, but rather a means of preventing further degradation in living standards - more properly a “life raft” than a ladder.

Ramon was not alone in his analysis; the belief that the labor market had become substantially more difficult for those without college credentials was widespread among respondents. As one respondent who entered the labor market in the early 1980s expressed it, “It (having a degree) just wasn’t you know as “important” at that moment as it is. I mean that is a conversation that no one would really have nowadays - so it’s like, of course you’re getting a college degree. You don’t – you just literally don’t have a choice in today’s economy.”

This belief is held not just by older respondents like Ramon, but by younger respondents as well. According to a 28-year old respondent:

For so long it was if you get a high school diploma you’d get a job. Now it’s like some of the jobs that you could just use to have a high school diploma you can’t even get the job
anymore – at least you have, not a degree but do you have any college credits? So it’s like right now I think the high school diploma is almost worthless and in the next couple of years it’s going to be almost nonexistent, it’s going to be like having your GED.

This respondent is of course too young to be drawing on personal experience in forming this conception of labor market change. His remarks are reflective of a narrative that is now part of the popular consciousness: that not too long ago a high school education was sufficient to secure a stable job at decent wages, but that time has passed. There is a widespread and growing consensus that the labor market has become more difficult, more competitive overall, but that for those without a college degree it has become near-impossible (Immerwahr & Johnson 2010). And in fact, this popular narrative is supported by the data on the labor market prospects of those who are now thought of as “the less-educated”. Wages for high school graduates have indeed declined, not just relative those with college degrees but in real terms, since the 1970s.

In the wake of the recession, some respondents felt that even a bachelor’s degree was insufficient to guarantee economic security. According to one:

To be honest with you right now it (a bachelor’s degree) doesn’t mean anything because there college people with a degree that don’t have jobs, they’re on unemployment, trying to make it, you know. There are some of them probably working at McDonald’s just try to pay their loans so right now unfortunately it doesn’t mean anything.

My interviews were carried out mostly in the winter of 2013-14, and the trauma of the Great Recession likely played a role in coloring respondents’ perceptions of the state of the labor market. But overall, their beliefs accurately reflect what are known to be broad trends in the labor market and the economy. Whether it is because of the computerization of the workplace, heightened global economic competition, de-industrialization, the declining power of unions, or the falling value of the minimum
wage, the economic position of individuals without a college degree has become increasingly difficult, and there are no signs of this trend reversing. In this context, going back to school and getting a college degree is perceived to be one of a small number of available options for improving one’s prospects. Moreover, many respondents recognized that even with a bachelor’s degree one is still not guaranteed security. The degree was seen not as a sure path to prosperity, but instead as a means of possibly avoiding the life of continued struggle and declining living standards which is sure to be their fate without it.

Credential Requirements at Non-Profit Service Providers. There were a few respondents who were earning a bachelor’s to satisfy a specific employer requirement. In each of these cases, the respondent was already competently (according to them) performing the tasks and duties of a position which nominally required a college degree. Some of the respondents had been promoted in everything but title and (full) pay to the higher position, and were told that the title and pay would follow upon degree completion. Others had been hired with the understanding that they would subsequently complete their degree, and that if they did not they would lose their job. All such respondents were employees of grant-funded non-profit service providers answerable to public agencies or private foundations. Such agencies compete for funding, and one of the currencies employed in bidding for grants and contracts is the educational attainment, and thus the purported skill and professionalism, of their staff. Agencies thus may claim that they “require” all of their staff at certain levels to hold a bachelor’s degree. Alternatively, such a requirement may be stipulated by funders as a condition for even entering the competition. Often, though, these requirements are at odds with agencies’ desire to promote from within, and their inability, given relatively low salaries, to truly demand college degrees at entry.

This situation reveals the sometimes arbitrary and absurd nature of degree requirements. There is every indication that respondents were performing at their job capably: they would likely have been
let go if this were not the case. Therefore, a college degree does not seem to be actually necessary in order to perform adequately at their jobs; further, one does not expect their productivity to increase substantially upon completion. Degree requirements are, in these cases, the arbitrary result of power relations among organizations rather than actual necessities for competent job performance. One suspects that the arbitrariness of degree requirements is not isolated to this particular situation.

*Hitting the Big 3-0: Internal Time Clocks and the Twilight of Emerging Adulthood*

I have noted that most respondents cited a desire for economic improvement as a motivation for attending. But not all such individuals seem to have been driven, in the manner of those discussed above, into college by poor working conditions specifically. There was another large subgroup of respondents who were more vaguely, subtly dissatisfied by their present occupations, and felt a desire for “something more”. Most had jobs in the service sector and were attending college in order to attain the qualifications for more “professional” or “intellectual” work. This flowed from a more general desire to “do something” or “achieve something” more in life than they had up to that point, and they wished to attain an occupational status that to them designated such accomplishment. Frequently, this desire became pressingly urgent as individuals approached particular ages, most usually age thirty.

Thus, in many respondents the desire for status was related to an internal time-clock or life calendar. Many respondents made explicit reference to age as a motivational force in leading them to go back to school. Either respondents reported that reaching or nearing a certain age led them to re-evaluate their present situation, or they reported having earlier in life set a goal of earning a degree by a certain age. For instance, Gelisa Davis explained that “my motivation now is when I was 24, the night before my 25th birthday, I said a prayer and I said by the time I was 30 I was going to be finishing my Master’s degree; when I was 31 I was going to be pregnant with my first child.”
For such individuals, a particular age is milestone with cultural significance: one must accomplish certain things by certain ages in order to be “on schedule”, a perspective which accords with the notions of social age and age norms employed by those who study the transition to adulthood (see Chapter 3, pp. 89-92). That Gelisa does not use prescriptive language such as “I ought to have my degree by 30” indicates that she has internalized the cultural norm but does not see it as externally imposed; rather, she sees it as her own personal goal. She experiences the cultural norm as the elective imposition of a timetable on her life-course in order to structure her efforts.

For other respondents, the process was not so conscious. They describe themselves as led to consider returning by the approach of a particular age; the specter of themselves reaching this age led them to take steps that they had perhaps long planned. Such respondents had put off completing college for a while, not feeling the pressing need to do so when they were younger. Joseph Massa, who had elected to “experience” the world rather than go directly into college decided to enroll as he neared age thirty. “You know, I was older at that point and I think I had just come back to my home town and ... I think I was thinking about school at that point, you know. I was about 30, 29 to 30 and so I was definitely thinking about school and just, you know, okay, working out what am I going to do.”

It is significant that Joseph’s abandonment of the freedom of youth coincides with both the close of his twenties and with his return to the area where he was raised. He was ending his period of exploration, the extended liminal period in which adult identity is fashioned, and returning to both an established life-course and to his community. Another example is found in Justine Kohler, who decided to forego college in favor of experiencing life in the big city (Chapter 2). She reports not ever thinking that she had given up on attending college for good; she would go later, when she was ready. “Ready” came, not surprisingly, in her late 20s.
I started bartending when I was 24, and I liked it a lot. And then one day it got really old – not one day, like gradually crept up on me. So when I was 29 I was bartending and I knew I couldn’t do it forever; and then I kind of didn’t want to do it anymore. And I thought about – and I finally felt settled; I had my own apartment, I had a steady settled lifestyle. I was like, well now what? I guess I’ll just go to school. Finally, I think I’m ready to go back to school.

Bartending, for Justine, was a fun way to live in her 20s, a way to fully experience urban young adult life, but as she approached 30 it began to lose its luster. She reports always understanding that her bartending job would be temporary, as indeed is the young adult lifestyle more generally, and the approach of thirty was the motivating force to begin transitioning into “real” adulthood. In the age of “emerging adulthood”, age thirty has become a significant marker of a shift in life stages. It is the twilight of youth, the time to buckle down and become “serious”: to begin a “career”, find a calling, become a professional. For all this the bachelor’s is a prerequisite and cannot be delayed further.

This pattern seemed to obtain particularly among middle-class delayers, but working-class respondents like Lesia Brown also were vulnerable to the feeling that time was running out as they approached thirty. She reports: “I guess the idea about turning 30 and not having a degree kind of shocked me – I think once I got into my mid 20’s or just like this like this time, I don’t want to be too old, too tired to go... I felt like if I didn’t do it know I wouldn’t have the strength to do it later as an older person.”

For others, especially those who delayed having children, there is a desire to hit adult milestones in a particular order. Lory Nieves ties her desire to finish school to the need to get a stable job in order to move out of her parents’ house and start her own family: “Also getting older, I was turning like 27 at the time and ... okay you are getting older, you want a family in a couple of years, you
want to get yourself situated, you want to move out and this [college] is kind of a way to help that, at least right now, at least taking a step.”

The approach of certain ages, combined with internalized life-course norms, is of course a proximate and partial explanation of educational return. For most respondents to whom this applies the desire for and indeed expectation of getting a college degree long predated their actual enrollment. For such respondents, the approach of age means that completing college ought not to be put off any longer. The timing of their enrollment is determined in part culturally, but so is the feeling, prior to this, that one has the freedom to delay. Some individuals - principally white middle-class individuals who performed well academically in high school - decide that their 20s are better spent in personal exploration rather than in school, confident that they can return later. They are not dissimilar to the college graduates portrayed in television shows like Girls and Broad City and films such as Frances Ha who spend their twenties living in cities and working at low-paying jobs while pursuing artistic and other interests. They simply begin this stage of their lives earlier and without first completing college.

For others, like Lesia Brown or Lory Nieves, college delay was less a result of personal choice and was instead the result of external financial circumstances. But ultimately, the approach of 30 is experienced similarly, as a time to mobile efforts to realize the stories of attainment they had told themselves many years before, prior to their detours.

*Becoming One of the Smart People: Self-Transcendence, Upward Mobility, and the Cultural Cachet of College*

When asked about the popular perception of the college educated compared with those who do not have a degree, many respondents replied that the college degree was interpreted in society at large
as a marker of intelligence\textsuperscript{62}. These responses concur with the observation of Sennett and Cobb that college degree is socially defined as a “badge of ability”, a sign and symbol of generalized competence (Sennett & Cobb 1973). Some respondents concurred with this social definition, perhaps owing to anticipatory socialization as a future college graduate, while most emphasized that while they recognized the existence of such a belief in the broader society, they personally didn’t hold with it. Four examples:

“People look at you like you are smarter (when you have a degree), which is not necessarily the case. They look at you like you are more serious... It just gives you a level of respect from people.” – Justine Kohler

“I think that there’s an idea that the more education you have, the smarter you are and that’s not my perception” – Greg Gager

“I think people without a college education are looked upon as less. I want to say stupid, but I don’t believe that they are stupid but I think people do believe that. Or they’re going to think that the person with the college education is smarter” – Samaria Jimenez

“For me, personally, to be honest I do think that if I have a bachelor’s degree or master’s degree that I am better than you because I put in more work than you have. I deserve to be smarter than you” – Coryn Higgins

Some respondents also commented on behavioral differences: the college-educated were seen as more refined, more cultured, more open-minded. Joselyn Moreno links such behavioral distinctions to knowledge of the world:

\textsuperscript{62} Interestingly, the next common response was a lay version of “signaling” theory – that the college degree was interpreted, particularly by potential employers, as a sign of tenacity, ambition, and commitment, and that those without a degree were stigmatized as lazy. Another common response was that college degrees led to prestigious jobs, and it was the jobs, not the degrees, that conferred respect. Only one respondent specifically mentioned college imparting useful skills.
Sometimes it’s etiquette. Sometimes it’s just the way you speak that you can tell, like you could just tell that somebody has a degree. The way they speak, the way they carry themselves. Most people who don’t have a degree, they have an attitude, they talk a certain way and they act in certain, they don’t know certain things. Like you ask someone about something, it’s like that doesn’t even make sense, you know? As opposed to somebody who actually has a little bit of an education, they will tell you, ‘You know, I don’t know about that but I will find out for you’. To me, I feel like you don’t have a degree you be like ‘No, that’s not how it is, that’s not how it goes and that didn’t happen in my way’. And it’s like, okay, well, maybe didn’t happen for you that way but… you know?

In her spontaneous response to my question, Joselyn refers to behavioral differences that she leaves mostly undefined, as if there is a certain ineffable something setting the educated apart which is visible in micro-behaviors, in the very stuff of minute-to-minute action that makes up a person’s presence in the world. Whereas college-educated people have “a way they carry themselves”, the less educated have “an attitude”. The former evokes grace, and the latter is shorthand for a difficult, obstreperous manner.

Interestingly, as an example Joselyn presents contrasting ways in which individuals respond when confronted with their own limited knowledge. The educated person, in her estimation, would consider the question asked as well as their own stock of knowledge and honestly admit their ignorance. Further, they would offer to “find out”, implying a confidence in their ability to discover the true answer.

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63 I cannot overstate the importance of the spontaneity of responses to these questions. The answers were not thought about ahead of time, nor did respondents typically pause for very long before answering. The answers should not be thought of as reflecting what the respondent “really” believes; rather, the each answer is better thought of as a spontaneous accessing of a general cultural archive of beliefs regarding educational distinctions. Different attributes that set the educated apart blend together in accounts such as that of Joselyn. They are hinted at without being elaborated, with a presumption that their interlocutor (me) will understand what they mean. But quite frequently, as in Joselyn’s answer, distinctions are quite complex.
This in turn implies the existence of objective, or at least validated, knowledge external to their person and their experience - a compendium of facts which have been discovered and logged by many others engaged in systematic, dispassionate research. The educated person both recognizes the primary legitimacy of this sort of knowledge, and has confidence in their capacity to access this trove of knowledge in such a way as to correct their ignorance. The less educated person, to Joselyn, relies reflexively on the primacy of their own experience - their knowledge is largely anecdotal. A proposition is judged by its agreement with previously held understandings (“that’s not how it goes”) derived largely from personal experience (“that’s not what happened to me”). There is an insularity to this perspective for which Joselyn has evident contempt, an inability or unwillingness to take advantage of objectivity or even inter-subjectivity. In her tossed-off response, Joselyn indicates a sense that becoming educated involves acquiring a different, superior epistemology, one that transcends the local and individual and partakes of the universal.

Fairly unambiguously for most respondents, to become educated is to “improve oneself”. This is improvement both in the sense of status ascendency – one improves one’s standing in the eyes of others – as well as through internal change. Some respondents dispute whether this change implies an actual increase in meaningful intelligence: as Ramon Salcedo states, “you can be have a degree and still be a dumbass.” But it is likely to influence how one behaves. For James Dudin, for example, becoming educated involves acquiring a separate communicative code. “Education is like another language. You can’t talk to intellectual people and join their conversations unless you are exposed to certain ideas and knowledge yourself, unless you learn to speak the way they do.”

For James as for Joselyn, knowledge and ways of speaking are conflated; educated people’s utterances are differentiated in terms of subject matter as well as vocabulary and phrasing. It is the latter element which leads him to compare becoming educated to learning a language, in the sense that languages are arbitrary codes, different ways of expressing similar ideas and concepts acquired through
time and effort. But his reference to knowledge growth (“exposure to certain ideas and knowledge”) indicates something other than pure formal differentiation. Education, for James, both changes what you know and how you behave, and it does both simultaneously. The educated are a separate group who speak differently about different things, and becoming educated allows one to speak as they do, to converse with them, and to in effect become one of them.

For some respondents, college attendance was motivated, in part, by a desire to join this class of people whom they perceived to be different, better, more culturally distinguished. Alena Lazos, a high school dropout, began in her early 20s to associate with a group of people who were nearly exclusively college educated, and who she describes as follows:

They were just so smart and I would find myself getting just so jealous of how smart they were and I would also feel a little dumb around them. So that, coupled with – and then around that time I started dating this guy who graduated from [elite private college] and he was studying for his LSAT at the time, and I was also really jealous of how smart he was and also feeling a little dumb in our conversations. So – and then he would also tell me, oh you’re smart, you should go back to school; you should go back to school – and then just – I all of a sudden got the drive and I did it.

Alena was dating and socializing with better-off, educated people, but she felt herself not to be truly one of them. It was not that she doubted her intelligence, per se - she assessed herself at the time as “street smart” – but felt that her stock of knowledge and cultural references was lacking. In order to fully become one of them, she felt she had to go to college. Alena was engaging in upward mobility through the accumulation of social capital, intuiting the circles into which she ought to integrate herself through sensing different social groups’ dynamism and emotional temperature. College-educated young people seemed exciting and dynamic, had more opportunities and were apparently going to live
more rewarding and fulfilling lives. She contrasted her experience of them with that of someone she dated earlier who didn’t have a college degree.

Well, I guess it’s because, like I remember I was dating – when I was 21, I was dating this guy who was 28 and he had been at [supermarket] for 10 years. And he didn’t go to college, he just went to high school. And I just remember thinking, I don’t want to be like him. He’s really depressed about everything; he regrets his life all the time. I just didn’t want to be like him at all.

This young man clearly served as an object lesson for her, an image of her future self if she did not change course. Soon afterwards, she met her college-educated “smart” friends, and this suggested that education would be the way of avoiding his fate and of joining the anointed. For Alena, occupation and class were bound up with social status membership and friendship groupings; her sense of how to achieve mobility involved the avoidance of working-class occupational trajectories and an attraction to the vitality of the educated. That she sees the educated as both already better off and as having prospects of further improvement is denoted through Alena’s offhand reference to her boyfriend’s “studying for his LSAT”.

Alena’s desire to join the more vibrant is echoed in the experience of Chris Francis, another high school dropout.

I think it’s all age, growing up. Your mind starts to develop, you start looking toward the future like, damn, this is not it, this is not what I’m going to do. My friends started changing, I started getting new friends and well those friends were in college. So I was like wow, I want to do this too, I like the college – I started hanging out with my friends who went to [local public college] and I used to love going to the game. And it was just like, wow, just looking at the environment I realized I wanted that. It was just like you
see all these people. Look at this. You won’t find this in my neighborhood. You don’t see this, smart people talking to each other, finding things out, you don’t get that. I mean, not to say that the people in my neighborhood are not smart but you’re in the institute trying to make yourself better. So I wanted to be in that group. I wanted to be part of that.

We see again the action of an internal calendar of opportunity and mobility. For Chris, this set in at age 25, after he had been bouncing around between low-paying jobs for about seven years, managing to get by but aware that his efforts were not leading to a prosperous or even secure future. Like Alena, he found a new direction through a shift in his social environment, through befriending a set of college-going individuals who introduced him to a milieu – a college campus - he found exciting and stimulating. His desire was to join this environment, and to join this group of people. He makes sure, in his narrative, not to denigrate his prior reference group, but then immediately re-enforces the contrast by referencing the self-improvement undertaken by college-goers. “People in my neighborhood” – a poor urban neighborhood – are not unintelligent, but they aren’t going anywhere. Economic opportunity and mobility are, again, conflated with both an intellectual atmosphere and social group membership.

Both Alena and Chris were high school dropouts from working-class backgrounds; “the educated” were external to them and they perceived them from both outside and below. Such distinctions between the educated and uneducated can appear more arbitrary when the social context is shifted. Both James Gray and Julie Sorrenti were high school graduates who worked in marketing, having begun their careers at a time when, according to them, having a college education was less prevalent in that field. Over time, however, the composition of the marketing workforce changed to the point where it was virtually unheard of to not have a degree. James emphasized that his skills on the job
were highly regarded, and he that he never felt that he was less competent than his college educated colleagues. Still, however, he at times would feel a social separation between himself and his colleagues due to his lack of college experience.

I knew my coworkers had degrees, you know, would hear conversations about school and you know, but it – there were times I would hear my coworkers in group talking about different things, you know, they experienced in school and I would just get quiet, I would just listen and it’s like, you know?... It was almost like a clique without it ever being a clique.

Among James’s coworkers, a college education was a central component of who they were - not just as individuals but as a group. It provided a set of common experiential reference points, the recounting of which helped constituted them as a group by bonding them together as similar. It was part of a presumed life trajectory for the people he worked with; indeed, it was likely the point of convergence of their life trajectories: no matter where they came from, where they grew up, they all went to college. James experienced himself as being outside the “clique” precisely during the interactions in which it generated and performed its collective identity.

He also recounted instances in which he disclosed to a coworker that he had never been to college.

I remember my last boss and I having a conversation, like, and he said something and I said, “Well, I haven’t been to college so I don’t know about that”. And he just stared at me. And he is like, “You haven’t been to college?” And I was like, “No”.... He is like “James, there is nothing about you that says I’ve never been to college”. I was like I don’t know whether to take as a compliment or what but okay.
The surprise that James recounts his boss exhibiting suggests both the degree to which having a college degree was simply assumed in that social environment, and that there was no reason to suspect that James did not hold one. James emphasizes this latter point, which has two implications. First, James performed at the level of his college educated colleagues; he emphasized that on-the-job training and experience were the crucial determinants of competence. Second, and more crucially, there was nothing about James’s demeanor which signaled his biographical difference from his coworkers. As he put it, “when you say that you haven’t gone to school people are expecting a certain person and I just don’t fit that mold” – which he credits to his middle-class upbringing and suburban education. James is noting that people whose speech and demeanor correspond to middle-class norms are presumed to have a college education.

James’s experience is paralleled by that of Julie Sorrenti. As with James, Julie also emphasized that the skills necessary for successful performance in her field were learned on the job, and not just by her but by college graduates as well. She was able to perform competently, but felt increasingly insecure as the workforce changed around her. Her description of how she reacted to this is worth quoting at length:

I’m in, now, a white-collar job. I’m moving up the ranks. Every single person around me, now even at this point, new people coming in, even the secretaries, had a kind of minimum B.A. And I always felt inferior because I only had a high school degree. And I started to look at people that I admired around the office and in the agency and what I did was I started to emulate them. I looked in their office, in the morning before they were working I would creep into the corner offices and look at what they were reading, what was on their bookshelves, and I was absorbing, sucking. I started reading *New York Times*, I started - because I worked in media I get a million magazines for free - all
the *People*, all that crap, *Entertainment Weekly*, was thrown aside. I was reading *The Economist*, I was self-educating and teaching myself. *The Economist*, newspapers from around the world – everything of high intellect. *The New Yorker*. Till this day I’m number one fan of *The New Yorker*. *Newsweek*, *Time*, *The Paris Review*, all these literary- *Harper’s Magazine*... I liked intellectual conversations. I was starting now to be invited to go out to lunch by sales people. I wanted to be part of the conversation. And listening to them, they’re talking about current events and whatever, politics, current events. Film, not movies, you know? (laughs). And I liked it. It wasn’t forced. I liked it, I took to it like a fish to water. I loved these conversations, listening to them, and I wanted to be a part of it and I wanted to contribute. In no time I was, pretty much increased my vocabulary because I would actually make a vocabulary list, I’d take out the *Times* in the morning. Oh yeah. And at the time – this is gonna sound to ancient – but remember there was no Google, there was none of this stuff so I actually had to go through a dictionary and I circled the words, vocabulary words, and I kept a book. I kept a running diary and I would write out the definitions.

Julie’s insecurity on the job derived, at least in part, from her humble educational origins. Her field was highly competitive, and she constantly had to master new skills. The narrative above, however, speaks to the cultural or intellectual components of being one of the educated, and of the great lengths to which she went to acquire the cultural sensibilities needed to “pass” as a full member of the group. This cultural education would permit her to actively join in the activities of bonding among the status group to which she (in her opinion tenuously) belonged by virtue of her position. She engaged in conscious manipulation of what Bourdieu refers to as “the cultural arbitrary”.

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Both James and Julie believe that social closure against those without college educations has intensified since when they were beginning their careers. They felt that they were in effect “grandfathered in” to their previous jobs, and that it would be more difficult if not impossible to enter their fields now without a college degree. But their unique position as already inside a now-restricted occupational sphere permitted them to more readily distinguish skill-related from cultural components of a higher education.

For people who remain outside, these components are more difficult to piece apart, and are linked together with notions of upward mobility. Vilana Echevarria, for instance, compares her own situation with that of her half-sisters, all of whom are highly educated and accomplished.

R: My sisters – my two sisters, my brother, my dad, my stepmom, my cousins, they all have an education and I had - like two they are lawyers... So I wanted to do it for myself because I wanted to feel like I fit in.... I needed to go back to school and learn. I needed to – I just wanted to have it.

I: Well, how does it make you feel like you don’t fit in?

R: I – because when for example when I meet somebody, like oh what do you do? Where were you going to school for? Oh yeah, do you have- what is your highest degree? Stuff like that. Like when they all talk about it, that, oh, I have a bachelor in this so my degree in this, so my masters in this. My cousin, she’s a lawyer for the United States in the civil part or immigration. She works for the White House. Like I always hear all this things and I am like oh me? Ah, I’m a case manager. So what are you going to school for? Oh I don’t my- I haven’t completed my degree, stuff like that. Like I didn’t feel comfortable with myself.
Vilana compares herself and her educational attainment to that of her stepsisters and finds herself to be wanting. It should be noted that she brackets staggering biographical differences in order to do so: her stepsisters were raised mostly in the United States by Vilana’s father, a doctor, and their mother, who is also college-educated. On the other hand Vilana, who is her father’s out-of-wedlock child, was raised in a poor village in the Dominican countryside by her illiterate grandfather and didn’t speak any English until her arrival in the United States at fifteen years old. However, despite all of this, Vilana feels inferior compared to her stepsisters and attributes this principally to her lack of education. She is impressed by them and has a desire to truly be one of them, but feels that without a completed degree, she will not fully “fit in” with her family\(^{64}\). Without it, she is uncomfortable with herself, “ashamed”, “lazy”, “not ambitious enough”. Vilana experiences the achievements of her sisters, as they are discussed in front of her, as accusations. Until she earns her degree, she is vulnerable to these accusations because not having the degree is experienced as prima face evidence that they are true.

Vilana believes that having a degree will positively impact her ability to present and position herself socially in the future:

I’m also going to feel comfortable as a person. When I – let’s say when I meet my next boyfriend I be like he ask me what I do or what I went to school for I can tell him I have a degree in sociology... But when you don’t – when you don’t – when you are 30 something and you don’t have an education, um, I think you, society seems to judge you as a lazy and somebody that doesn’t have any - any goals.

Here, Vilana anticipates feeling more confident presenting herself in the world, and in particular in the dating market, once she has finished college. She anticipates going through the ritual that indeed inaugurates nearly every meeting between two adult strangers: the exchange of basic social coordinates

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\(^{64}\) One suspects that her feeling that she doesn’t fit in derives largely from her actual status as a half-sister raised entirely separately, and that she focuses on the educational difference because it is the only one she can alter.
such as one’s job, one’s education, one’s plans for the future. In such encounters, one tells the person they are meeting a story about themselves, about who they are and have been in the world, and submits this story to the judgment of the stranger. One does not know what the individual stranger will think, but does know the general, collective valuations of different statuses. Vilana understands that her story will be more generally approved of, and she will feel more comfortable telling it, once it includes the attainment of a bachelor’s degree. She understands that this will make her more desirable to potential mates – especially ones who also have a degree.

This matter of self-presentation applies to jobs as well. As was suggested in the narrative of Alena Lazos, there is an interest and vibrancy to the occupational lives of some people and not to those of others – some people’s jobs give them knowledge and experiences which are of interest to others. One’s job can impact one’s social reception, one’s acknowledgement by strangers as “interesting” or worthy of attention – in short, how one’s identity is valued in public. And the jobs open to those without a college degree often seem to fail on this account. Justine Kohler recalls becoming defensive sometimes at her job as a bartender. She reports that “before I even decided to go back to school and I would be at work bartending and people would be like, so what else do you do? I don’t do anything else; and they look at you like oh. They’re like, this is all you do? Well, it’s kind of tiring, I’m on my feet for 9 plus hours a day. Yes, this is all I do.”

On the one hand, Justine’s job has a particular obstacle: while bar patrons have working lives apart from the present situation that can become a topic of conversation, the bartender’s occupational life is manifest in the situation itself. But Justine felt guilty in the face of this question – it wasn’t good enough that “all she did” was tend a bar; this alone wouldn’t make her an interesting person. Going to

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65 That those with blue-collar jobs are aware of this is suggested by an interaction in Elliott Liebow’s *Tally’s Corner* (1967), in which a bricklayer asks rhetorically, “when is the last time you ever saw anyone standing around talking about concrete?” Liebow’s point is that socially devalued jobs are devalued as well in the eyes of those who hold them, and that this devaluation impacts these individuals’ self-perception. It is also that such devaluation is experienced by these individuals in day-to-day interactions, particularly with those with more valued occupations.
school provides her with a better story to tell about herself, not just something else that she does while not tending bar but forward momentum: she is going places, becoming someone other than the bartender she is right now. Vilana’s anticipated conversation with a potential mate has an identical structure: she wants to be able to avow a social identity that is dynamic, vibrant, and desirable because of its forward, upward momentum. Being in one’s 30s without a degree is a guilty social identity, guilty in the moral universe of merit and attainment. It is to avow, to some degree, personal, individual failure.

This is suggested by Jacob Hartman’s testimony. Jacob has a rare genetic disorder which made him too ill to finish his college education a number of times. Even though his having not completed his degree was the result of poor luck in the genetic lottery, he still felt vulnerable in having to give an account of himself and his attainments before others:

Yeah, I felt - sometimes I felt really defensive about it. And, like, I would talk to my wife and say, like, “oh, that person was judging me.” And she was like “I don’t think they were. But you clearly thought that they were” (laughs). Um, and yeah, that happened a number of times. I really felt, and that had to do with my feelings of failure and stuff, but yeah, I definitely felt that.

Jacob relates that this changed once he actually earned his degree.

Weirdly that was part of the giant stress relief that I didn’t know what was going to happen once I graduated... you know, I have a degree now. It doesn’t matter where it’s from. It doesn’t, like, great, I’m Jacob Hartman, BFA, yay!... You know, nothing had changed but that... (in) the process of actually graduating it just sort of – it - really it was like this weird magical switch flip, like, I succeeded. Where I failed so many times before I did it.
Jacob believed, in multiple encounters, that he was being judged by people he met. He seems to think this is principally a matter of projection – he was externalizing his own thoughts of self-recrimination and judgment onto others. But on the other hand, what is considered societally worthy, valuable, respectable is not a matter of individual, idiosyncratic psychology. Rather, people judge themselves in relation to where they feel they ought to be, and according to more broadly held societal notions of status and achievement. And he found, unexpectedly, that his anxiety in this regard was substantially alleviated once he earned his BA. As he notes, his occupational status didn’t change, but this change in his narrative meant that now he was socially different. He no longer had to publically avow educational failure.

For Alma Soler, going to college really does alter who a person is. She contrasts the people that she knows now that she is in college with people where she grew up:

The people from my church – a lot of them still didn’t go to college... They are kind of like stuck in the same box that they’ve always been and I can sit there and have conversation with them and feel weirdly back 8 years ago and nobody has grown; there has been no change or anything. But there is a huge difference in the perception that they have of the world and how they are stuck in this little town where they won’t get out of. They’ve been there, they go to church there, they live there; this is what they’ve always known. And you know what? There is nothing wrong with that; some people are like that. Some people can be where they’ve always been forever and not ever want to experience something else. But I definitely see a difference in the way we interact in different types of people that I surround myself with now.

For Alma, the contrast between education and its lack is also a contrast between growth and stagnation, and between universalism and provincialism. The geographical immobility of those she grew
up with is symptomatic of a more fundamental stasis: their understandings of the world and their perspectives on life have not changed. For Alma, this is due to intransigence; they stay with “what they’ve always known” because they do “not ever want to experience something else.” Her former church-mates lack curiosity, openness, ambition, a sense of exploration and a willingness to take risks and learn. Though she says that she does not disapprove of this, it is clear that Alma sets herself apart from them and is glad – indeed, proud - that she has transcended her origins. She is now part of a different group of people, people who differ from her church friends in precisely the ways she has described.

But who are these people that one joins by earning a degree? For some people, like Vilana, it seems that the group consists of particular, concrete individuals. But even for her there is a set of imagined others she anticipates meeting. For Samaria Jimenez, that this status group is in part ideal and virtual is more explicit:

When I go to school, David, and I hit the campus and I start to walk, I feel like, “oh my God, look at what I’m doing; look at where I’m at; look at what I’m trying to accomplish.” I get this feeling that I belong to this secret society of college students and that’s – it’s kept me in school... To be a college student, you’re part of this – I want to say smart people for a lack of a better term, but you’re just part of a people that are learning new things; that are experiencing new things – that, you’re just accomplishing something. You’re going to be part of the people with diplomas on the walls, the master’s degrees. It’s a whole different type of group of people. People who are in college versus people who are not. I experience that every day here.

Samaria, through college, feels that she is touching the universal. She is joining a secret society, people who are set apart by their dynamism, their continual self-transcendence: they are continually
learning and experiencing new things. They are growing and changing through their contact with a world of knowledge and experience that is the shared knowledge of humankind. Through contact with this universal, this store of knowledge and truth, they become different, a set-apart elite. Though it has taken her twenty years to get to this point, Samaria exhibits a clear anticipation of the moment when she will fully join this group.

In sum, to some extent respondents were not merely seeking higher wages or more enjoyable jobs, though they were certainly seeking those as well. In going to school, in completing a degree, they were seeking many more things, things which they in general only half-sensed and half-defined. We can say that they were seeking a transformation in their social identity and membership in a more valued social stratum, but this description is partial, for they wished to achieve this membership through a transformation of themselves, and indeed a self-transcendence. They wanted not only to join this group, they wanted to become one of this group. This group is defined by vitality, movement, opportunity, but also by superior cultivation and understanding. It is also defined by access to the universal, to truth, and thereby to power and sophistication. The ideology of higher education lends it, in the popular imagination, a transformative power: to become educated is to be elevated and changed at once, and indeed the elevation is justified only if the change which occurs is qualitative and profound.

“I’m Telling My Kid He’s Going to Harvard”: Role Modeling for the Younger Generation

As has already been noted, it was widely believed among respondents that over time a college degree has become increasingly essential if one wishes a middle-class existence. Many respondents extrapolated this trend into the future, believing that if things are bad for those without a degree now, it would likely be far worse when their children are on the job market. In keeping with this, a number of respondents cited a desire to role model college-going for younger relatives, and in particular for their offspring, as a motivation for returning to school.
A number of respondents were concerned about their children’s educational outcomes, even though the children were quite young at the time of the interview or, in some cases, were the hypothetical children the respondent planned on having in the future. They wanted to be able to insist that their children go to college, and that they do it directly out of high school, but worried about whether this demand would carry weight and legitimacy if they themselves lacked a college degree. Joselyn Moreno provides an example:

I: So what is the, what’s the motivation for finishing (your degree)?

R: My daughter. I have to finish, like I have to when she – when it’s time for her to go to school I can’t ever tell her oh you have to go to college, you have to go to college while I have no college degree, like I can’t tell her. When she asks me why should I go to college, you didn’t go to college - I can’t have her say that to me. So I need to finish so I can show her yeah it took me 10 years to do it but I did it, so you have to do it.

I: Do you plan on telling her that she has to go?

R: No, she has to go to college. She doesn’t have a choice. She has to go.

Since Joselyn’s daughter was two years old at the time of the interview, she is, in this exchange, already projecting herself and her daughter forward fourteen or fifteen years and imagining an interaction or set of interactions which (she expects) is likely to occur. She expects to need to convince her daughter to go to college, and she expects, or fears, resistance to this idea. There is something implied by this: Joselyn does not expect the transition to college, for her child, to be smooth and taken for granted, as it is in many upper middle class families today. That is, she does not expect the reproduction of educational attainment, whereby a college graduate can expect their offspring to view going to college as simply the next thing one does after high school, to be fully actualized in her family.
Joselyn, of course, has a very logical reason to expect this to be the case. After all, her transition to college was not smooth despite the fact that her mother has a master’s degree (in social work) and despite her attending, at parental expense, a Catholic girl’s high school which was focused (according to her) on college preparation. Joselyn says that she “always” planned to go to college, but the transition was rocky. She planned to go into the military first, as her father did, so didn’t focus in high school on getting good grades. According to her, she only decided in her senior year to go directly into college after high school, and by then it was “too late” for her to get her grades up enough to get into a “good” college.

One can speculate that the conversation Joselyn imagines above would occur as a result of her daughter earning grades which reflect an inadequate academic focus or effort. To this extent, Joselyn is putting herself in the place of her parents in relation to her teenage self, and attempting to correct what she feels was their insufficient academic motivation and direction:

I mean they told me that- it was, you know, like, “You should go to college, you should go to college” and they always said “Yeah, you’re gonna go to college, go to college, go to college”. But it was not very like – if I brought home a bad grade I wasn’t like punished. You know, it was just like, “Well, if you want to go to college you need a better grade you know”.

Joselyn is not faulting her parents for failing to encourage her to go to college; what she is faulting them for is a failure to discipline her sufficiently to keep her on the college track. Her parents, she believes, were too hands-off in this regard: they said that they wanted her to go, but they didn’t follow through parentally. It is unclear to me (and might be unclear to Joselyn) what exactly they ought to have done; she says later that when she got bad grades “they made me feel bad” and encouraged her to get her grades up. What is significant is that Joselyn does not plan to repeat whatever mistake they
made with her own daughter. Joselyn says her daughter “has to go to college. She doesn’t have a choice.” She plans on being a tough academic disciplinarian and motivator because she fears (likely) that her daughter will repeat her own mistakes.

Individuals like Joselyn, and indeed many respondents, are in something of an intermediate position in terms of the social reproduction of educational attainment. They did not reject educational participation, as did Ramon Salcedo at seventeen, and as did both Jay McLeod’s “hallway hangers” and Paul Willis’s “lads” (MacLeod 1987; Willis 1977). They had internalized the notion that college attendance was something they ought to do, but were unable, for reasons they were often unable to fully articulate, to follow through behaviorally on this belief. It is as if though they knew they should go, but were unable to convince themselves that they really would go, at least not without difficulty. And college completion was certainly never conceptualized as inevitable, but would come, if at all, only at great personal effort and cost. Joselyn wishes to spare her daughter this experience, but suspects that it will be easier if she herself has finished a degree. She fears that she will be open to the charge of hypocrisy if she has not.

This very same dynamic exists for Greg Gager. He, too, feels that he was inadequately motivated for educational attainment by his parents.

It was expressed to me that it was important that I do well in school but I also got mixed messages. You know when you’re a little kid people ask you what you want to be when you grow up and I just asked my mom what she wanted me to be when I grow up and she would always tell me ... she didn’t care what I did, she didn’t care if I was garbage man, as long as I was happy. And I think that she probably could have told me something better than that. I’m telling my kid he’s going to Harvard.
Greg does not doubt his own intelligence, but he freely admits that he “didn’t try” in school, and didn’t get good grades. Moreover, he feels (now) that he didn’t get the grades he was capable of getting. Greg, like Joselyn, puts plenty of blame for his rather tortuous route through college on himself, but he also – again like Joselyn – thinks that his parents’ motivational style was at least partially at fault. For him, their failure was in giving him inadequate aspirations for life. His mother’s response to his question could be seen as a very warm expression of unconditional love, but this is not how Greg sees it from the vantage point of a man in his 30s struggling to complete community college. Now he seems to feel that this sentiment was inadequate to motivate him to do his best in school, and this has resulted in a decade or more of false starts and frustration. He has every intention of avoiding this for his son (who, at interview, was one year old). But in order to do so, he will need to complete his own schooling:

I recognized as an adult that my parents were role models for me and then I’m going to be a role model for my kid and I didn’t want him to model himself after a guy who was delivering auto parts under the table or driving an ambulance (jobs Greg has held)... I needed to have an education so that when I told him he needed to go to Harvard he couldn’t give me a hard time and say, “Well, you never went to college”

Just as with Joselyn, he both wants to spare his child some of the heartache he has endured through taking the difficult path through college and he expects, or at least fears, that getting his child to take the collegiate path will be a fight, that his child will resist. And like Joselyn, he feels he will be open to the charge of hypocrisy unless he has a degree.

James Dudin enunciated a number of reasons for returning to school, but one of them was to be an educational role model for his kids. As he puts it “I want to have that [the degree] for when I have kids, so that I can encourage them, guide them, be an example to them.” Unlike Greg and Joselyn, however, James’s children were neither born nor on the way. He wanted to be a role model for the
children he planned to have. That this idea of role modeling educationally for one’s children can be held by people whose offspring remain hypothetical speaks to its cultural power. Finishing one’s degree, it is believed, will make one a better parent, because as a parent it is one’s job to motivate one’s child for success in a competitive school system and workforce. Without a degree, one can be a loving parent, a caring parent, but one may not be able to be a parent who can properly motivate their child to do as well as they need to in school in order to be properly armed for success in an icy labor market.

Other respondents, who had older children, saw their present enrollment in more inspirational terms. Tonya Morgan, for instance, had a child soon after leaving college at nineteen, and did not return to higher education until her daughter was herself enrolled.

My daughter says “Ma, you have to finish”. Because we both in college at the same time now, right? (laughs) So I can’t quit because then I’d feel like a failure. And again not only would I feel like a failure, I want her to know that you can complete something no matter how late you do it. Or because I’m 40 doesn’t mean that I can’t complete it. So that’s my goal for her, to see that it can still be done, no matter how you felt or as life changes, plans happens. And even though you have this vision of completing something, something happens which I couldn’t. So I want her to know that it still could be done.

Tonya, in contrast to Greg, James, and Joselyn, wants to be a positive object lesson to her daughter, and sees this lesson in her own present status as an adult student. Whereas they want to prevent their kids from taking the difficult road through school, Tonya wants to show her daughter that “it can still be done”, even if something interrupts her plans. Tonya is not expecting this to happen; she doesn’t appear to believe that her daughter, like her, is likely to be shunted from the collegiate track by some unforeseen life event. But she wants her daughter to know that even if this happens, one can still pursue one’s (educational) goals, no matter how late.
Gloria Fernandez provides, perhaps, the narrative that links the earlier narratives of Joselyn, Greg, and James with that of Tonya, and extends both:

I dedicated myself to raising my children and helping them with their careers and their education. Because with them, how I portrayed to them, it was like never a choice. I never said, okay, there are limitless possibilities in what you could do. I always said you have to go to high school, finish it successfully, and go into college. You have to. That’s it. So once my baby, my son, was getting to that age, that he was in college, I was like, you know what I want to do? I want to finish. I want to finish for myself, and also to show my kids: yeah, you know, I didn’t finish it when I should have, when I could have, when it would have been less stressful and I didn’t have responsibilities. But look, I am doing it now. And it’s harder but I am doing it. And I wanted to show my daughter that, because my daughter stopped. She started at [local college] for forensic psychology and she stopped to have my grandson. So I wanted to model for her. Like, okay, it’s going to be harder, and this is why I didn’t want for you, but you decided to do that. Okay, no problem, but look, you could still end up. Look at Mom.

Gloria reports that she presented college to her children precisely the way that James, Greg, and Joselyn intend to present it to their children. It was “never a choice”; they were expected to go and “that’s it”. Despite this parental mentoring, which was designed to help them complete college at the age they “should”, when it is easier, her daughter dropped out to have a child. Despite a parent’s best wishes, “life happens”, as Tonya Morgan phrased it. In this social stratum - in which collegiate attendance is internalized as beneficial but not as inevitable - intrusive life events which can derail educational plans are conceived of as ever-present possibilities, chiefly because they in fact are ever-present possibilities. Their occurrence can be resisted, can be guarded against with parenting strategies,
but can never be rendered unlikely or impossible. Indeed, this occurred earlier to Gloria herself: she left college at nineteen, after a year, because familial demands on her time and energy became too intense to permit her to continue. And it occurred with her daughter. Gloria hopes that her current schooling will serve as an object lesson to her children: don’t give up, you can always go back, it is never too late.

A Note on Influential Others

I have concentrated thus far on certain economic and cultural factors which play a role in motivating respondents to enroll in college at older ages. There was some indication that enrollers take others into consideration in making their decisions – they care about the opinions of others, wish to join a group of more highly-educated people, and want to be an educational role model for their still-young children. Nonetheless, I have not commented on more direct influence by important others in respondents’ lives. This reflects, to some degree, the narratives of respondents themselves, and perhaps their wishes to portray themselves as particularly agentic or self-motivated. But there were glimpses, in interviews, of more active encouragement by others.

Some respondents mentioned a particular conversation with someone – usually a friend or co-worker – which got them thinking about returning to college. For example, James Gray discussed being encouraged by friends to go to school repeatedly, but dismissing such suggestions. But one conversation made an impression on him. “I never forgot (a friend) saying... you are going to turn 50, you can either turn 50 with a degree or without one. And that stuck in my head.” Joseph Massa, similarly, recalled being encouraged by a coworker at a social services job to think about going to college if he wanted to continue in the field. Both respondents portrayed these conversations as pivotal for getting them to think actively about enrolling. They were both in a place in their lives in which they were restless and looking to change something, and these interactions focused their attention on college as a means to make this change.
Other respondents recall encouragement from spouses, partners, family, friends, or employers. Gloria Fernandez was motivated to return, but it helped that “I had my mom – mother in my ear and my family like you should go back, you should go back and finish.” Gelisa Davis discussed a long-term employer who she saw as a “mentor” encouraging her to continue in school. James Dudin, Jacob Hartman, and Greg Gager were all married to more highly educated women who either supported their college plans or more actively encouraged them to complete a bachelor’s degree. Still others received childcare assistance from family members which made the return to school possible in the first place.

For the most part, respondents portrayed the primary impetus for going back to college as their own response to something in their lives. But some respondents recalled more active help. Justine Kohler’s friends were mostly college-educated, and one friend in particular who was “a real go-getter” helped her select schools to which to apply. This friend was “just over the moon” about the idea of her going to college. Alice Hodges credits her partner as the one who “began the conversation” about her returning to college, in response to her feeling restless and discontented in her job.

Finally, there were respondents who credit others for helping them to break out of a feeling of directionlessness. Alma Soler had attended and dropped out of community college twice, despite her long-standing desire to go to college and her decidedly academic orientation in high school. She was working full-time and living at home when she had an encounter which led her to rethink what she was doing.

I think I was 20 or 21, I had met this guy that I had known for a long – he’s known me since I was like 4 and I saw him and we were talking about – he was asking, what are you doing; because that was the question everybody asks. What are you doing; where are you going? And I was like I don’t know; I don’t really know what to do. And he is like listen, you just need to go back to school; whatever you feel and your heart is
passionate to do, go back to school and do it. He is one of the first people that actually told me that; find what do you love and follow that. And so it really made me start thinking, like I really need to get my life together. And at this point all my friends were in the course of graduating with their BAs. So I am going to graduations and I am like my gosh, what is wrong with me? Like what I am doing wasting my life away?

An even more extreme version of this was related by Mace Cabrera, a young man who had also dropped out of community college. He had done so ostensibly to help his family out financially, but also revealed that he hadn’t performed well in his first two semesters in community college and didn’t have a clear idea of why he was there. After working for a while at a local retailer, he quit the job. He had been unemployed, living at his mother’s home, for over a year.

Again I had left [company] and there was nothing more for me to do. I was staying at home and wasn’t doing anything. But then I had two serious talks; one with my mother and then with my close friend and they were very emotional conversations. Both conversations ended in tears; not just me but my mother and then my friend also, which I’ve never seen him cry. He is always a serious no nonsense kind of guy.

Mace credits these two conversations with leading to his going back to college. Clearly Mace was in severe danger of “doing nothing”, of finding a place in neither school nor work and becoming a burden on his family. The two conversations seem to have been something like “interventions” in which he was implored to change his course. At this point, returning to the community college he had already left seemed to be the best option he had. At the time of interview, he had settled on majoring in education to become a teacher, but seemed not particularly sure about this path.

Conclusions
I want to re-iterate two things regarding the above discussions. First, they are not intended to be exhaustive enumerations of motivations; many other reasons were given by respondents in explaining why they returned. The themes expounded upon above were selected both because of the frequency with which they recurred throughout the interviews and because I found them to be particularly suggestive and intriguing. Second, as is probably clear, most respondents articulated multiple reasons for enrollment. And what is more, after initially enrolling, many discovered additional reasons to continue attending. For instance, one recurrent theme which I did not explore above was the discovery, after beginning school, of a genuine, often enthusiastic interest in learning. Suffice it to say, this has been and must be a partial account.

One of the major findings of this chapter concerns economic motivations for the return to school. It is both commonplace and uninformative to say that adult students – all students, really – attend school for largely instrumental, job-related reasons. Nearly all students have some occupational aspiration in mind, vague or specific, when they enroll in college. But my research emphasizes that such a generalization hides important heterogeneity. Some people, such as James Gray, were tired of their current job, though it paid well, and wanted to change careers. Others, like Justine Kohler, were felt the need to get a “career job” once age 30 was approaching. These are “job-related reasons”, but they are hardly decisions made under the pressure of economic exigencies. But for others, like Elisa Thompson, or Ramon Salcedo, college enrollment was seen as a means – indeed, the only available means - of exiting an intolerable labor market situation. For these individuals, college was not seized upon as a means of upward momentum, but principally to prevent a downward slide. If successful in completing a degree, these individuals can probably expect some improvement in pay and job quality. They will probably be less likely to be laid off and will be given more on-the-job respect. But what was more pressing, for them, was the gnawing suspicion that without a degree they were bound only for worse hardship than they were already experiencing.
The second major theme to emerge from these interviews is the almost magical quality that the college degree seems to possess, particularly in relation to identity. There is a certain alchemy that degree attainment is believed to enact upon one’s place in the world. Going to college and earning a degree meant, for many respondents, a fundamental change in one’s social identity. Though it will not necessarily mean a better job or a higher salary, at least not immediately, one becomes instantly someone with a college degree, and this alone means a difference in social esteem. In particular, all of the negative assumptions that have come to settle on individuals without a college education – laziness, poor ambition, a lack of intelligence, inability to follow through on plans – will no longer apply to them, and they will stand as less guilty before their fellows. I want to stress the word guilty, because to a large degree achievement has become moralized, and having not achieved means that one is failing to live up to a moral standard.

Finally, this chapter presents more evidence for what occurs when individuals only partially internalize the college attendance imperative: college is attended haltingly, tentatively, with unrealistic career goals that are chosen only because one has to choose something. Having been selected by default, college is not completed quickly or easily. This is the college experience for those at the margin of college attendance and for whom there really isn’t an assurance of much gain as a result of attending. After initial enrollments end unsuccessfully, individuals cast about for someone to blame for the slow, desperate path they have had to make through life, through educational failure and occupational frustration. They locate part of the blame in their own inability to truly focus on school, and part descends on their parents. They vow, then, to do differently. This is not dissimilar from the sort of pattern that noted by Sennett & Cobb (1973) in which working-class parents desperately pushed the success of their offspring in order to compensate for their own feelings of failure. In the version here, failure includes attendance in college, and completion of the degree, at long last, represents
redemption. And only through completing the degree can one become a good parent, one who can accomplish the task of properly motivating their child to succeed in school, to do college “the right way”.

The portraits that have emerged in this chapter point to the complicated place of higher education in the life of a large swath of Americans. Most Americans today will attend some form of higher education; for some period of time, however long, they will be “college students”. But the sort of college experience which is generally accessible to all is far from the middle-class collegiate norm. It is a difficult process which is chosen without certainty and oftentimes abandoned quickly. It is, more than ever, conceived of as the principal solution to the problems which plague the lower half of the economic spectrum, if only they could finish a degree. And difficulties in finishing college, despite its accessibility, ensure that many of those who have dropped out indict themselves for their subsequent hardships in the labor market and in life.
Chapter 6

Is It Worth Going Back? Completion and the Economic Benefits of College Education for Adults

Given that large numbers of adults who participate in higher education, it is reasonable to wonder whether or not they tend to benefit by so doing. Of those who enroll, how many make it through, eventually, to a degree? And do they realize a return on their educational investment in the form of higher wages and better working conditions? These are matters of interest from both social science and policy perspectives. Sociologically, the impact of education among adults provides evidence pertaining to the causal effects of education at different ages, the importance of completing life-course transitions “on time”, and the ability of non-traditional students to negotiate higher educational institutions. From the point of view of policy, it provides information about the utility of open-access educational institutions. Should colleges do more to accommodate adult students, and should adults be encouraged to enroll in college? If they degree completion among adults is rare, and if they scarcely benefit from their experience, then perhaps money would be better spent in more targeted training programs for displaced workers than on need-based grants for adults wishing to attend undergraduate institutions.

There is another, broader matter to which this investigation is relevant – the practicality of upward mobility through higher education as a means to economic security. Over the past few decades, the American welfare state has been considerably scaled back and unions have seen the portion of the workforce they represent progressively whittled away. Meanwhile, and in consequence, the living standards of those holding a high school diploma or less have declined in real terms. I claimed, in Chapter 1, that this situation generates economic pressure which likely contributes to adult enrollment, and presented quantitative and qualitative evidence supporting this contention in Chapters 4 and 5. In essence, I have argued that there are increasingly few alternatives to going back to college for adults.
without a bachelor’s who wish to attain economic security for themselves and their families. And indeed, educational upgrading is often presented in precisely this light by politicians and policy experts – as what economically distressed adults can and ought to do to improve their situation.

In short, we as a society have reduced the power and reach of institutions which provide security collectively, leaving for the most part only institutions which permit attempts to individual garner security through upward mobility. We do not know, however, how effective this collegiate route to security is. The American higher education system remains quite accessible to adults throughout the course of their working lives – it is a system which permits innumerable second chances. But does this accessibility mask a more general futility? Is open access higher education for struggling adults essentially a false promise? Or does it represent a real, viable path to security and prosperity for the millions of such individuals who enroll in it each year?

In this chapter, I investigate these matters systematically, again using data from the NLSY79. I begin by establishing the rate of college completion among those who enroll as adults, and the correlates of such attainment. I then turn to an analysis of the effects of college-going. I make use of a statistical method called the marginal structural model which is employed to estimate the causal effects of a time-varying treatment from observational data. Following the work of other analysts, I estimate the impact of attending college and completing college in adult years on wages. But I also investigate the impact of attainment on other aspects of employment – job satisfaction and access to important non-wage benefits such as health insurance, sick leave, and paid vacation. These estimates will aid an understanding of whether earning a degree improves not only adults’ wages but also their working conditions.

My findings in this chapter are quite mixed. I estimate a completion rate among adult college-goers which is neither particularly high nor abominably low, and find that the probability of completing a
degree varies by gender, socioeconomic background, measured academic capacity, and early parenthood. I estimate modest returns to additional enrollments shy of a degree, and find that these returns are relatively similar across different population subgroups. Finally, I estimate returns to a college degree, in terms of both wages and benefits, which are considerable for women but much less robust for men.

Theory and Prior Research

The Effect of Education on Wages

The correlation between education and earnings has been found with such frequency and consistency by social scientists that it has reached the status of obviousness (Hout 2012), but why precisely this relationship exists is a matter of considerably more controversy. Though a number of theoretical accounts have been developed, the human capital model is overwhelmingly dominant. According to this theory, education is a species of training, and training constitutes an investment made in a worker in order to increase his or her productivity. Formal education differs from the sort of training that employers provide on the job principally in terms of its sphere of applicability: whereas on-the-job training teaches job-specific skills, the skills gained through formal education are thought to be transferable to any employment context. Because productivity is enhanced through training, and because labor is presumed to be remunerated according to its productivity, human capital theory finds it entirely sensible that better-educated workers earn more on average (Becker 1964).

The very existence of educational credentials poses a problem for the orthodox version of human capital theory. Such theorists consider time in school to translate directly into higher productivity, which in turn raises wages, leaving no purpose for the degree as such. However, substantial research has found that indeed degrees do impact wages over and above the effect of years of schooling (Belman & Heywood 1991; Ferrer & Riddell 2008; Hungerford & Solon 1987; Jaeger & Page
Two related theories have been developed to account for these “sheepskin effects” of degrees: Spence’s (1973) theory of labor market signaling, and Stiglitz’s “screening” theory (1975). Both theories focus on the symbolic value of the degree: it is interpreted as social shorthand for the possession of a set of behavioral attributes which enhance productivity, such as tenacity, discipline, and intelligence. The theories differ in terms of whom is believed to have agency. In signaling theory, the job-seeker uses the degree to indicate their superiority to employers, but in screening theory it is the employer who actively weeds out those with inferior educations. What is noteworthy is that in the “strong” versions of these theories, the value of education is purely symbolic—it indicates pre-existing personality traits rather than imparting new skills. “Weak” versions, by contrast, function as amendments to human capital theory (Bills 2003).

Alternative conceptual models, including Marxian “control theory” (Bowles & Gintis 1976), “cultural selection theory” (Bourdieu & Passeron 1977), and “credentialist theory” (Collins 1979), are deeply critical of the human capital theory’s intellectual architecture and its political implications. Control theory describes schooling as providing the necessary discipline for a stratified labor force, inculcating character traits needed by employers in different strata of workers. While this theory ostensibly departs radically from human capital theory, Bills (2003) notes that the two models concur in asserting that education directly inculcates employer-desired traits: productivity in the case of human capital theory and docility in that of control theory. By contrast, in Bourdieu’s cultural selection theory, education itself does very little. Schools select students for advancement on the basis of pre-existing cultural traits deriving from their socioeconomic background, interpreting privileged-class behavioral norms as evidence of greater intelligence and motivation. Similarly, Collins’ credentialist theory portrays educational credentials as mechanisms which enable members of privileged classes to hoard opportunities for access to desirable occupations—as means of positional power which are not at all reflective of the possession of superior skills. More recently, Brown (1995) has married the insights of
Bourdieu and Collins, arguing that the college credential was initially utilized in hiring decisions by employers because it served as a marker of privileged-class demeanor and character.

Most empirical research on the return to education has been performed under the aegis of the human capital framework, and has sought to identify the precise size of the effect of education on earnings. In such work, the chief source of difficulty is so-called “ability bias” – individuals possessed of more innate ability both obtain more education and are more productive on average (and thus earn higher salaries); there is a strong likelihood of overstating the return to education by failing to properly sort out such selection effects. In a spate of studies conducted in the 1990s, researchers employed instrumental variables in order to identify the causal effects of education\(^\text{66}\). Importantly, a number of studies uncover substantial returns to additional time in school for those who do not complete degrees (Angrist & Kreuger 1991; Kane & Rouse 1993; Maluccio 1997; Meghir & Palme 2005). Others provide evidence of negative selection – that is, higher returns for those less likely to acquire additional schooling (Brand & Xie 2010; Card 1995). Such studies provide crucial support for at least a “weak” version of human capital theory, and are evidence against “strong” versions of the screening, credentialist, and cultural selection models. Some more recent work has suggested that credential effects may depend on the type of educational system – that credential effects are more marked in highly tracked and vocationally-oriented systems (Bol & Van de Werfhorst, 2012).

*Education and the Qualitative Aspects of Employment*

Given that workers with higher levels of education tend to get paid more on average, it is reasonable to suspect that they have a more generous benefits package. This effect, however, has been little studied. Hout’s comprehensive review of the causal effects of college education makes no mention

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of such effects (Hout 2012). Though there is a social science literature on the causal effects of education on health (Ross & Wu 1995; Silles 2009), the contribution played by greater access to quality health care via employer-subsidized insurance is rarely investigated. Nonetheless, it is true that, at the descriptive level, better educated individuals are more likely to have health insurance coverage (Ange, Frias & Hill 2005; Burgard & Hawkins 2014; Monheit & Vistnes 2000). According to an authoritative survey, compared with college graduates, those with some college but no degree were 2.5 times more likely to lack insurance, and high school graduates and those who had not completed high school were 3.5 and 6 times more likely to be uninsured, respectively (Adams, Martinez, Vickerie, & Kirzinger 2011). The relationship between educational attainment and access to other key benefits such as sick leave and paid vacation has, to my knowledge, rarely been explored.

This is particularly surprising given that the existence of variance in access to such benefits is fairly specific to the American context, at least in terms of the larger universe of rich countries (Ray, Gornick & Schmitt 2010). Whereas in most countries such benefits are universal entitlements, in the United States their provision is left to the discretion of employers, and are utilized as a means of attracting and retaining valued employees. Less-valued employees are often not extended such benefits unless this extension is compelled via a union contract (Buchmueller, DiNardo, & Valletta 2002; Freeman & Medoff 1984). Moreover, such benefits are highly valued by employees and may substantially improve workers’ quality of life.

Table 6.1 presents cross-sectional statistics on job benefits from the 2000 wave of the NLSY79 separately by gender and educational attainment. It should be noted that in 2000, respondents were between 36 and 42 years old, and that the sample does not include individuals who immigrated to the US after 1979. Therefore, incidence of benefit coverage will be higher among this sample than in the general population. But general patterns are instructive. College graduates have greater access to nearly every type of benefit, and access is substantially greater in terms of paid sick leave, retirement,
educational benefits, and flexible scheduling. Gender differences favor males for most benefits, but females in the areas of parental leave, and childcare benefits.

Table 6.1. Incidence of benefit access by members of 1979 NLSY cohort in 2000

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Full Sample</th>
<th>BA</th>
<th>HS Grad</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health insurance</td>
<td>71.47%</td>
<td>78.67%</td>
<td>68.59%</td>
<td>65.07%</td>
<td>77.65%</td>
</tr>
<tr>
<td>Childcare benefits</td>
<td>7.71%</td>
<td>11.32%</td>
<td>6.26%</td>
<td>8.17%</td>
<td>7.26%</td>
</tr>
<tr>
<td>Flexible Schedule</td>
<td>49.45%</td>
<td>57.15%</td>
<td>46.37%</td>
<td>47.60%</td>
<td>51.24%</td>
</tr>
<tr>
<td>Profit-sharing</td>
<td>26.02%</td>
<td>27.95%</td>
<td>25.25%</td>
<td>23.29%</td>
<td>28.66%</td>
</tr>
<tr>
<td>Parental leave</td>
<td>56.12%</td>
<td>62.72%</td>
<td>53.48%</td>
<td>59.74%</td>
<td>52.62%</td>
</tr>
<tr>
<td>Education benefit</td>
<td>48.65%</td>
<td>63.87%</td>
<td>42.56%</td>
<td>46.03%</td>
<td>51.17%</td>
</tr>
<tr>
<td>Dental insurance</td>
<td>61.03%</td>
<td>68.17%</td>
<td>58.17%</td>
<td>56.44%</td>
<td>65.45%</td>
</tr>
<tr>
<td>Retirement plan</td>
<td>62.91%</td>
<td>73.53%</td>
<td>58.66%</td>
<td>57.43%</td>
<td>68.21%</td>
</tr>
<tr>
<td>Paid vacation</td>
<td>68.36%</td>
<td>70.87%</td>
<td>67.36%</td>
<td>61.81%</td>
<td>74.69%</td>
</tr>
<tr>
<td>Paid sick leave</td>
<td>55.43%</td>
<td>66.93%</td>
<td>50.83%</td>
<td>54.21%</td>
<td>56.60%</td>
</tr>
</tbody>
</table>

Source: NSLY79

The relationship between educational upgrading and subjective evaluations of jobs is not as straightforward. On the one hand, more educated workers tend to earn more and to have jobs which have grant them more autonomy, authority, and prestige, and these aspects of work tend to make it more satisfying (Glenn & Weaver 1982). However, education also raises workers’ expectations and aspirations, leading to a greater possibility of dissatisfaction with jobs that fail to meet these higher standards (Berg 1970; Freeman 1978). Moreover, educational upgrading raises the possibility of being overqualified for one’s job, which has been found to severely reduce job satisfaction (Vaisey 2006). Prior research has mostly found the impact of education on job satisfaction to be modest and operating through increased remuneration and autonomy rather than through more intrinsically enjoyable work (Fabra & Camisón 2009; Glenn & Weaver 1982; Mottaz 1984; Ross & Reskin 1992).

The Return to Education among Adult Undergraduates

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67 Parental leave, as inquired about in the NLSY79, is defined as “(maternity/paternity) leave that will allow you to go back to your old job or one that pays the same as your old one?” It does not imply that this leave is paid leave.
As Card (2001) notes, the economic return to education is “not a single population parameter, but a random variable that may vary with other aspects of individuals, such as family background, ability, or level of schooling”. One might suspect as well that the return to education depends as well on when in one’s life course the education occurs. And indeed a number of studies of adult schooling estimate a substantial ‘penalty’ to completing one’s education at an older age. Using British data, Egerton (2000) finds lower earnings among mature graduates, and attributes this to lower social origins and a higher concentration in state employment. Tanuguchi (2005) finds a 25% reduction in the college wage premium among older graduates, and Monks (1997) estimates this premium to decline by 4% for each year one ages prior to earning the degree. Light (1995) finds that wage gap between graduates who had been continuously enrolled and those who delayed their education depends on how both the length of delay and on time in the labor market after completion. The sole dissenting voice is that of Ferrer and Menendez (2009), who find that graduates who delayed entry into college earned between 3 and 10% more than graduates who had enrolled directly from high school, even controlling for prior work experience.

Other researchers are interested in simply whether older graduates benefit from their education. Jenkins and colleagues (2003), using British data, find little in the way of positive wage effects from adult schooling, with except for males with very low initial education. On the other hand, Jacobson, Lalonde, and Sullivan (2005) estimate substantial gains to community college enrollment among displaced adult workers; these gains were found to be higher for women than for men. And Leigh and Gil (1997), using the NLSY, also find substantial wage gains for adults who enrolled at community colleges, and in fact estimate that adults gain more than younger students from such education.

*The Counter-factual Framework of Causal Inference*
In making causal claims, the most widespread threat to validity is *selection bias*, which occurs when those who tend to take up a given ‘treatment’ differ systematically from those who do not in ways both observable and unobservable (Heckman 1979). If such systematic differences also impact the outcome, causal power may be spuriously attributed to the treatment. The focus on selection bias has led methodologists to reframe causal questions as *counterfactuals* (Morgan & Winship 2007; Rubin 1974, 1977). In such a framework, we ask what *would have happened* to treated individuals had they not taken the treatment, and to control cases if they had. Ideally, we would observe all cases in both conditions. In this case, we could identify the individual-level effect of treatment $T$ on outcome $Y$ as $\delta_i = (Y_i | T = 1) - (Y_i | T = 0)$, and the average treatment effect in the population as $\delta = E((Y_i | T = 1) - (Y_i | T = 0))$. 

That we never encounter such a situation empirically has been dubbed “the Fundamental Problem of Causal Inference” (Holland 1986) and the identification of causal effects is thus considered a missing data problem – we are missing outcomes for subjects in their counterfactual states (Winship & Morgan 1999). This identification problem is best surmounted through random experimental assignment, wherein differences between treated and control cases will occur purely through chance (Rubin 1978; Shadish, Cook & Campbell 2002). However, since a good many relevant questions are not amenable to experimental manipulation, researchers have developed a number of statistical methodologies for approximating the conditions of random assignment using observational data. These include propensity score matching (Rosenbaum & Rubin 1983), instrumental variables (Angrist, Imbens & Rubin 1996), dummy endogenous variables (Heckman 1978), regression discontinuity designs (Hahn, Todd & Van der Klaauw 2001; Imbens & Lemieux 2008) and differences-in-differences estimators (Bertrand, Duflo & Mullainathan 2004).

*Fixed-Effects Estimators and Marginal Structural Models*
Longitudinal data introduces additional complexities to matters of causal inference. In this paper, I make use of two methods of identifying the causal effects of additional higher education among adult students: fixed-effects models and inverse probability of treatment weights. Fixed-effects models have a long tradition in longitudinal data analysis, and are helpful for causal inference because, since they model only within-individual change, they are able to control for time-invariant unobservable factors which may influence both probability of being treated as well as the outcome (Angrist & Pischke 2009:221-227). In essence, they permit individuals to act as their own controls. They are the most commonly employed method for estimating the effects of adult education, having been used by Monks (1997), Taniguchi (2007), and Light (1995). In this chapter I employ fixed-effects models to identify the effect on wages of further enrollment in education short of a bachelor’s degree.

Fixed-effects models have three important drawbacks for causal inference. First, because they model within-individual variance only, coefficient estimates for an independent variable will draw only on cases for which that variable actually varies. In the case of a dichotomous variable such as college graduate status, a fixed-effects estimate will be based on information from only those who were both non-graduates and graduates over the period in question. Thus, a fixed-effects estimate is restricted to estimating what is known in the treatment effects literature as an “average treatment effect on the treated”. The results do not generalize to individuals who did not earn a college degree during the study period. This objection bears on the meaning of parameter estimates and on their validity. Second, fixed-effects models remove bias from to unobserved time-invariant factors, but not that from time-varying factors. Typically, researchers address this through the standard regression-based approach to selection bias: they include a vector of time-varying covariates and presume that this is sufficient.

The third objection is most serious. In using a fixed-effects model, one presumes that, within individuals, time-period observations are independent given the confounders. That is, after we adjust for covariates such as age, work history, job tenure, etc., we presume that the timing of exposure to
treatment is essentially random. This is necessary if an individual at an earlier period is actually to be a reasonable counterfactual for themselves at a later date. But this is a rather unrealistic assumption when it comes to educational careers. Individuals who plan to return to school may not act strategically to maximize either their earnings in the present or their long-term earnings trajectory in a non-college track. They may, for instance, turn down a promotion which would raise their earnings in the present but make it more difficult to return to school in the future, or may stay at a more stable, lower-paying job rather than switch to a field or firm which is more remunerative.

To the extent that individuals’ plans for future education affect their present labor market behavior, two consequences follow. First, fixed-effects estimates of college effects will be substantially biased upward. Second, individuals are no longer their own best counterfactuals; indeed, a better counterfactual would be a very similar individual in terms of fixed and time-varying characteristics who does not plan to attend college. Such an individual is far better representative of what the college-planning individual would have done in the absence of college plans. This is particularly obvious in the case of using fixed-effects models to estimate college effects on wages of traditional college students but also likely applies to the earnings trajectories of older undergraduates.

Marginal structural models (MSMs) are an alternative method for making causal inferences in panel data. Robins, Hernan, and colleagues (Hernan, Brumback & Robins 2000; Hernan, Brumback & Robins 2001; Robins 1999; Robins, Hernan & Brumback 2000) argue that in panel data, causal inferences will by be biased if there exist time-varying covariates which predict both treatment and outcome, and if prior treatment history influences subsequent levels of covariates. To attend to these issues, marginal

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68 For “traditional” college students, pre-graduation earnings are drawn exclusively from teenage years and from jobs while concurrently enrolled. In the case of such individuals, fixed-effects estimates of college effects are most likely grossly overstated. For this reason, the findings of Monks (1997) and Taniguchi (2007) of the wage penalty for later graduation are highly suspect, even though they adjust for age, tenure, and experience. For adult graduates, fixed-effects estimates are more justifiable, but many adult students plan to re-enroll for years prior to actual enrollment and these plans are likely to affect their earnings trajectory.
structural models employ a simple but robust form of adjustment by weighting. A predicted probability of exposure to the treatment for each person-period observation is estimated using vectors of fixed and time-varying variables. Typically this is done using logistic regression, but there is no reason in principle why logistic regression models need to be used. Next, for each person-period, the probability of the treatment status that actually occurred is generated. For treated case-periods the probability of receiving actual treatment is $P(t=1)$; for untreated case-periods it is $P(t=0)$. The reciprocal of this value is then calculated as the weight for subject $i$ at time $t$, known as inverse probability of treatment weight (IPTW):

$$W_i(t) = \frac{1}{pr(A_0 = a_0 | L_0 = l_0, X_i)}$$

Where $A$ is the value of the treatment variable, $L$ is a vector of time-varying confounders, and $X$ is a vector of time-invariant confounders. Marginal structural models typically include an additional vector $A(k-1)$, which represents the subject’s treatment history. However, for this study, the time-varying treatment (having a bachelor’s degree) is a non-reversible status, and so this vector can be omitted.

The application of IPTWs generates what Robins refers to as a “pseudo-population” of treated and control person-years which ought to be independent of time-varying and time-invariant confounders. In this pseudo-population, person-years which are statistically likely to have their actual treatment status are down-weighted, and those which are statistically unlikely to receive their actual treatment are given more weight. This should result in a pseudo-population in which time-varying and time-invariant confounders are balanced, and thus in which bias deriving from them is removed. The method, given certain assumptions, should permit internally valid estimates of treatment effects, as long as there are no unmeasured confounders (Cole & Hernan 2008). But because of the use of
weights, the pseudo-population may differ substantially from the population used to generate it. Generalizing back to this population must be done cautiously.

Data and Methods

Data

I make use again of data from the National Longitudinal Survey of Youth-1979 cohort. For the analyses this follow, I exclude individuals who attained a bachelor’s degree prior to age 25, or who dropped out of the survey prior to their 35th birthday. As in Chapter 5, I analyze a person-period data file. However, in the NLSY79 not every individual could be interviewed in each wave, and retrospective questions regarding income were not asked in subsequent interviews. Also, as mentioned previously, after 1994 interviews were conducted biennially, and income data is not available for any respondent during odd-numbered years after this point. I therefore include only person-years in which individuals were actually interviewed and in which they provided valid responses for employment and income. This results in an unbalanced panel, but for all individuals there are at least ten separate observations. The final dataset for analyses of earnings contains 194,110 person-years, clustered within 7640 individuals.

Dependent Variables

Personal income is measured annually until 1994, and biennially afterwards, and in each year represents a sum of three variables: wages and salaries, earnings from farms or businesses, and military earnings. Yearly income was standardized to constant 2000 dollars and logged.

The NLSY began asking questions regarding job satisfaction and non-salary benefits in different interview waves depending on the question, and Table 6.2 summarizes the availability of these measures. Job satisfaction was measured since the first survey on a four-point Likert-type scale, with responses such as “very satisfied”, “satisfied”, etc. I transform this into a binary measure in which “very
“satisfied” and “satisfied” are coded as 1 and the other responses as 0. Job benefits were mostly measured in binary terms – whether or not the respondent has access to the given benefit. The exceptions are sick leave and paid vacation, about which the NLSY79 posed binary questions until 1992 and afterwards inquired as to the precise number of days granted. To keep these variables consistent across the survey, I coded the later-year measures in binary receipt/non-receipt form. As with income, retrospective questions regarding benefits and satisfaction were not asked of individuals who had skipped a survey wave, nor were they measured for non-interview years.

Table 6.2. Availability of job satisfaction and benefit variables in NLSY79

<table>
<thead>
<tr>
<th>Variable</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>1979-2010</td>
</tr>
<tr>
<td>Health insurance</td>
<td>1979, 1980, 1982-2010</td>
</tr>
<tr>
<td>Paid vacation</td>
<td>1979, 1980, 1982-2010</td>
</tr>
<tr>
<td>Sick leave</td>
<td>1985-2010</td>
</tr>
<tr>
<td>Parental leave</td>
<td>1985-2010</td>
</tr>
<tr>
<td>Dental insurance</td>
<td>1985-2010</td>
</tr>
<tr>
<td>Profit sharing</td>
<td>1988-2010</td>
</tr>
<tr>
<td>Education</td>
<td>1988-2010</td>
</tr>
<tr>
<td>Retirement</td>
<td>1988-2010</td>
</tr>
<tr>
<td>Child care</td>
<td>1988-2010</td>
</tr>
<tr>
<td>Flexible hours</td>
<td>1989-2010</td>
</tr>
</tbody>
</table>

Independent and Control variables

Education is measured in two ways. In one analysis, I am interested in whether any enrollment in college has, on average, an effect on wages. For this analysis, the independent variable of interest is a time-varying count variable of the cumulative number of years in which an individual has enrolled in higher education after turning 25. This does not distinguish among enrollments according to their length, nor does it distinguish consecutive years of enrollment from more isolated spells, but it permits an estimate of the average impact of enrollment on earnings. Education is later measured in binary
terms, as having or not having a bachelor’s degree. This variable is employed as the dependent variable when modeling the probability of completing a degree among older undergraduates.

In the MSM analyses, I include a large set of time-invariant controls. Socio-demographic variables included are gender, race/ethnicity (Black and Latino each defined against the White reference group), year of birth, number of siblings, a dummy variable indicating having been raised by a single parent, and an indicator for growing up in a rural area. Immigrant generation was measured through separate dummy variables for foreign-born individuals and the children of foreign-born individuals (defined against the native-born child of native-born parents reference group). Socioeconomic status is measured through five separate variables: household income in 1979 (as a percentage of the median), parents’ educational attainment, parental occupational prestige, parental occupational category, and the occupational category of employed respondents in the base year. Parents’ education is categorized as not having completed high school, having completed high school, some college education short of a bachelor’s degree, and having a bachelor’s degree or more. Where parents’ education differed, the higher value was taken. Parental occupational prestige was measured through 1979 Duncan SEI scores for various job categories, and recoded into five categories based on ranges of these scores. Job category was defined as either professional/technical; manager/administrator; sales, clerical and services; craftsmen and operatives; and not presently employed.

I measure academic ability and orientation through individuals’ AFQT score, their average high school grades, and responses to questions regarding whether one wanted to go to college in 1979, whether one expected to graduate, and whether one’s best friend planned to attend college. Additional school-related variables include a scale of the socioeconomic disadvantage of one’s high school classmates, a variable indicating whether a respondent ever dropped out of high school, a dummy variable indicating whether a respondent was ever suspended or expelled from high school, and the year in which one left high school. I also included a set of attitudinal and aspirational measures,
including the prestige and category of the job the respondent aspired to in the base year. I included scales for measuring respondents’ locus of control and self-esteem, as well as a scale measuring agreement with traditional gender norms. All attitudinal questions were measured in the survey base year.

I additionally include, in MSMs and fixed-effects models, a set of time-varying covariates: age, tenure at one’s present job (measured in weeks), cumulative work experience (measured in weeks), number of children, marital status (never married, married, divorced/separated, or widowed), and a set of dummy variables indicating categories of the age of one’s youngest child. In fixed-effects models, quadratic forms of age, tenure, and experience are included as well.

**Partition Tree Classifiers to Address Problems in Predicting Rare Exposures**

Marginal structural models presume, among other things, that the estimated probability of treatment is reasonably accurate for both treated and control groups. This assumption can be questioned when the model used to generate this probability is misspecified or is missing crucial determinants of the treatment. But it also fails when the method through which the probability is estimated is not suited to the particular estimation task. MSMs typically estimate the probability of receiving the treatment using a logistic or probit model, but both of these methods encounter serious difficulties when faced with rare events (King & Zeng 2001). Specifically, where the empirical distribution of the outcome is severely unbalanced, logistic regression maximizes predictive accuracy by over-assigning cases to the majority response category. In the case of rare treatments, the probability of treatment for the treated group will be severely underestimated, and inverse-probability of treatment weights generated for these estimates will be, for treated cases, both highly skewed and intractably large.
I measure bachelor’s attainment status between ages 25 and 53 among adults who reach 25 without a bachelor’s degree; in only 7% of these person-years is there a positive response on this outcome variable. A logistic regression employing a rich set of time-varying and time-invariant predictors predicts the outcome poorly, assigning a low probability of exposure to this treatment (having a bachelor’s degree) to both treated (BA=1) and control (BA=0) person-years (Figure 6.1, panel A). The probability of receiving the empirically observed treatment is thus distributed oddly: the probability for non-exposed years is predicted well, but exposed person-years are overwhelmingly predicted to not have been exposed (Figure 1, panel B). When we take the reciprocal of this probability, exposed cases end up with very large weights, while non-exposed cases have weights clustered around 1 where they ought to be.

Robins, Hernan and Brumback (2000) anticipate heavy skewness and kurtosis in the IPTWs, and propose “stabilized weights” in which the IPTW is multiplied by the probability of the treatment given only the treatment history. Other researchers multiply instead by the probability of treatment given...
treatment history and baseline covariates (Hernan, Brumback & Robins 2001; Wodtke, Harding & Elwert 2011). Stabilized weights are, as the name suggests, less skewed and are approximately normal in distribution. However, as Table 6.3 indicates, in the context of a rare treatment stabilized weights do not fully address the problems of skewness or extreme IPTW values. Moreover, Table 6.4 reveals that the employment of stabilized weights reverses much of the covariate balancing between treated and control person-years which had been achieved by the IPTW method. In the case of some variables, employing stabilized weights actually exacerbates bias over and above that found when using only population weights.

Table 6.3. Distribution of IPTWs

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Variance</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Largest Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistic Regression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPTW, BA=0</td>
<td>11.50</td>
<td>404.60</td>
<td>7.558</td>
<td>101.04</td>
<td>520.867</td>
</tr>
<tr>
<td>IPTW, BA=1</td>
<td>1.313</td>
<td>930.39</td>
<td>212.27</td>
<td>52321.53</td>
<td>8876.83</td>
</tr>
<tr>
<td>Stabilized Weight, BA=0</td>
<td>75.24</td>
<td>7471.64</td>
<td>2.753</td>
<td>15.16</td>
<td>11.659</td>
</tr>
<tr>
<td>Stabilized Weight, BA=1</td>
<td>.9279</td>
<td>.8560</td>
<td>3.158</td>
<td>19.182</td>
<td>1253.14</td>
</tr>
<tr>
<td><strong>Partition Tree</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPTW, BA=0</td>
<td>1.874</td>
<td>36.902</td>
<td>15.643</td>
<td>284.419</td>
<td>149.42</td>
</tr>
<tr>
<td>IPTW, BA=1</td>
<td>1.017</td>
<td>.037</td>
<td>28.563</td>
<td>1228.260</td>
<td>14.017</td>
</tr>
<tr>
<td>Logged IPTW, BA=0</td>
<td>.2621</td>
<td>.2663</td>
<td>4.186</td>
<td>26.345</td>
<td>5.0067</td>
</tr>
<tr>
<td>Logged IPTW, BA=1</td>
<td>.0115</td>
<td>.0075</td>
<td>12.833</td>
<td>215.507</td>
<td>2.640</td>
</tr>
</tbody>
</table>

Source: NLSY79

I turn to a powerful computationally-intensive classifier, the partition tree, to obtain more precise estimates of the probability of exposure. Developed by Leo Breiman and colleagues (Breiman et al. 1983), partition trees work by iteratively partitioning the data into smaller and smaller subsets of cases (‘leaves’), at each juncture producing groups which are increasingly homogenous in terms of the outcome or target variable. At each stage, they decide upon the optimal split in a computationally-intensive manner: by attempting splits using every value of every variable supplied by the researcher.

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69 I also tried neural network, boosted tree, and random forest models to classify the person-years by treatment status; partition trees were chosen as the most accurate classifier.
and choosing that which has the effect of most greatly reducing the data’s overall entropy. That is, it chooses the split that renders the set of resulting leaves maximally homogenous. In a large dataset such as this one, with over 100,000 person-year units, a tree will make a very large number of splits of the data, generating a very complex predictive model which sorts cases efficiently into categories of the outcome. Such a model will in effect employ non-linear specifications of continuous terms and complex interaction terms involving multiple independent variables, all without the researcher having to specify them as such a priori.

Table 6.4. Mean values of confounding variables by treatment condition. Bolded numbers indicate statically significant differences (p<.05, two-tailed test)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Population Weights</th>
<th>IPTW</th>
<th>Stabilized Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BA=1</td>
<td>BA=0</td>
<td>BA=1</td>
</tr>
<tr>
<td>Job tenure</td>
<td>318.68</td>
<td>329.42</td>
<td>306.36</td>
</tr>
<tr>
<td>Work experience</td>
<td>811.11</td>
<td>710.02</td>
<td>727.03</td>
</tr>
<tr>
<td>Age</td>
<td>37.63</td>
<td>34.75</td>
<td>35.63</td>
</tr>
<tr>
<td>Female</td>
<td>.4537</td>
<td>.4309</td>
<td>.4630</td>
</tr>
<tr>
<td>Parental ed: less than HS</td>
<td>.1909</td>
<td>.2404</td>
<td>.2804</td>
</tr>
<tr>
<td>Parental ed: HS</td>
<td>.3435</td>
<td>.4930</td>
<td>.4582</td>
</tr>
<tr>
<td>Parental ed: Bachelors/higher</td>
<td>.2801</td>
<td>.1347</td>
<td>.1105</td>
</tr>
<tr>
<td>Family income (% of median)</td>
<td>94.92</td>
<td>87.16</td>
<td>73.69</td>
</tr>
<tr>
<td>AFQT</td>
<td>62.59</td>
<td>48.27</td>
<td>40.14</td>
</tr>
<tr>
<td>School disadvantage</td>
<td>-.2765</td>
<td>-.1704</td>
<td>.2020</td>
</tr>
<tr>
<td>Number of kids</td>
<td>1.32</td>
<td>1.36</td>
<td>1.59</td>
</tr>
<tr>
<td>Child younger than 6</td>
<td>.2388</td>
<td>.2938</td>
<td>.2408</td>
</tr>
</tbody>
</table>

Source: NSLY-79

With a mandate to generate final leaves which are as homogenous as possible, partition trees are in danger of severely over-fitting data. To protect against this, I employ k-fold cross-validation. This method splits the data randomly into a k sections or folds (here, k is equal to 5). Separate partition trees are then grown using each set of k-1 folds and tested on the remaining fold. The algorithm ceases.
building a tree when a given statistic, such as the AIC or pseudo-$R^2$, begins to worsen in the test data—the fold not used to generate the model.

I estimated a partition tree predicting having a college degree using all person-years in which individuals are 25 years of age or older and have at least 12 but no more than 16 years of education, and I included both time-varying and time-invariant covariates. The tree split the data nearly 900 times, in the process achieving a remarkable degree of predictive accuracy: a 98.8% of cases were correctly classified. More importantly, the partition tree performed well in classifying both treated (sensitivity=89.2%) and control units (specificity=99.5%). The logistic model, by contrast, achieved its level of overall predictive accuracy – a respectable 93.7% - by predicting control units well (specificity=98.72%) but utterly failing with treated units (sensitivity=25.31%).

Figure 6.2.
The partition tree generated probabilities\textsuperscript{70} close to 1 for the majority of both treated and control units; this reflects the fact that the selection model was quite accurate. The inverse of these probabilities can be used as IPTWs; units with low probability of exposure to their observed treatment are up-weighted substantially, while those likely to receive their own treatment are assigned smaller weights. The distribution of the weights is, as was the case with logistic regression, quite skewed, and if retained will result in a small number of heavily influential cases driving the results of the analysis. To reduce skewness, I logged the IPTWs. Doing so had two effects. First, it substantially reduced the variance and skewness of the weights (see Table 6.2). Secondly, resulting weights generated very-well matched distributions of key confounders among person-years exposed to the treatment and those which were not. For example, in Figure 6.2 I present matched distributions of most powerful variable for predicting exposure to treatment: AFQT scores. In Panel A, I employ population weights only, and the distributions are very dissimilar, because those who will eventually earn a college degree have substantially higher measured cognitive scores on average. Weighting by just the inverse probability of treatment derived from the partition tree, in Panel B, corrects this bias somewhat, but treated person-years remain more highly clustered in the upper part of the score range. However, weighting with the logged IPTWs (Panel C) matches the groups nearly perfectly on this variable.

Bias reduction is further demonstrated in Table 6.5. For most of these covariates, initial distributions were quite different. For instance, average high school grades were about a fifth of a letter grade higher on average for those eventually earned a bachelor’s degree. In the IPTW-generated pseudo-population this is shrunk to a fiftieth of a letter grade. Prior to reweighting, the difference between treated and control person-years in the proportion having college educated parents was fifteen percentage points; reweighting shrinks this difference to less than 2 percentage points. Finally, 

\textsuperscript{70} Partition trees generate a non-parametric estimate of the probability of class membership by calculating the proportion of cases belonging to a given class in each terminal leaf, and assigning that probability to all cases in that leaf.
consider differences in college expectations. Using population weights, 53% of those represented in person-years in which the subject has a bachelor’s degree expected to eventually graduate from college, compared to 30% of those represented in person-years without a degree. After reweighting, the respective percentages are 57.5% versus 57.8%.

Not all of the variables have been successfully controlled in this manner. Person-years remain unbalanced in terms of cumulative work experience, age, and the presence of young children. In regression models employing logged IPTWs, such variables were added as controls.

Table 6.5. Mean values of confounding variables by treatment condition. Bolded numbers indicate statically significant differences (p<.05, two-tailed test)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Population weights</th>
<th>Logged IPT weights from partition tree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BA=1</td>
<td>BA=0</td>
</tr>
<tr>
<td>AFQT</td>
<td>62.59</td>
<td>.48.27</td>
</tr>
<tr>
<td>Job tenure</td>
<td>318.68</td>
<td>329.420</td>
</tr>
<tr>
<td>Cum. Work experience</td>
<td>811.11</td>
<td>710.02</td>
</tr>
<tr>
<td>Age</td>
<td>37.63</td>
<td>34.75</td>
</tr>
<tr>
<td>Female</td>
<td>.4537</td>
<td>.43092</td>
</tr>
<tr>
<td>High School grades</td>
<td>3.68</td>
<td>3.47</td>
</tr>
<tr>
<td>Number of Children</td>
<td>1.32</td>
<td>1.36</td>
</tr>
<tr>
<td>Child less than 6</td>
<td>.2388</td>
<td>.2983</td>
</tr>
<tr>
<td>Child 6-10</td>
<td>.1375</td>
<td>.1575</td>
</tr>
<tr>
<td>Child 11-18</td>
<td>.1674</td>
<td>.1546</td>
</tr>
<tr>
<td>Adult child</td>
<td>.1095</td>
<td>.0816</td>
</tr>
<tr>
<td>Married</td>
<td>.7007</td>
<td>.6698</td>
</tr>
<tr>
<td>Divorced</td>
<td>.13144</td>
<td>.1345</td>
</tr>
<tr>
<td>Parental Ed&lt;HS</td>
<td>.1909</td>
<td>.2404</td>
</tr>
<tr>
<td>Parental Ed Some College</td>
<td>.1853</td>
<td>.1318</td>
</tr>
<tr>
<td>Parental Ed BA+</td>
<td>.2801</td>
<td>.1347</td>
</tr>
<tr>
<td>Family Income</td>
<td>.9492</td>
<td>.8716</td>
</tr>
<tr>
<td>White</td>
<td>.8573</td>
<td>.8123</td>
</tr>
<tr>
<td>Black</td>
<td>.0958</td>
<td>.1326</td>
</tr>
<tr>
<td>Latino</td>
<td>.0468</td>
<td>.0549</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>8.25</td>
<td>8.68</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>23.13</td>
<td>22.42</td>
</tr>
<tr>
<td>Traditional Gender</td>
<td>2.10</td>
<td>2.32</td>
</tr>
<tr>
<td>Expects to graduate College</td>
<td>.5391</td>
<td>.3012</td>
</tr>
<tr>
<td>Friend wants College</td>
<td>.5692</td>
<td>.3645</td>
</tr>
<tr>
<td>Ever dropped out of HS</td>
<td>.0560</td>
<td>.0543</td>
</tr>
</tbody>
</table>

Source: NSLY-79
Results

College Completion among Adult Undergraduates

Before proceeding to analyze the effects of higher education, I first address a preliminary matter: the prevalence of degree completion among adults who return to college and the correlates of completion. This matter has been addressed in a relatively small set of papers, including Taniguchi and Kaufman (2005) and Jacobs and King (2002); in these studies part-time enrollment, having young children, delayed enrollment, divorce, and being employed were found to lower the odds of degree completion, while prior enrollments, higher cognitive scores, and pre-college managerial employment raised it.

I present first, in Figure 6.3, a graphical depiction of enrollment and degree attainment among adults who reach age 25 without a bachelor’s degree, as it occurs between the ages of 25 and 50. The topmost line depicts the percentage of adults without a bachelor’s degree who have ever been enrolled, whether in before or after turning 25. Already by 25, over 35% of non-baccalaureate adults had spent time in college, and by 50 this increases to just under 45%. The bottom-most line shows the rate of bachelor’s attainment for this group. Prior to 25 this rate was, by definition, 0%, and by age 50 it has climbed to 10% - that is, 10% of the members of these cohorts who had not earned a bachelor’s degree by 25 did so by 50. The solid gray line in between these two is the completion rate in among those who reached 25 without a bachelor’s, determined by dividing the percent with a bachelor’s by the percent ever enrolled. This rate rises from 0% to nearly 25% by the end of the age-range. Finally, the dotted line shows the college completion rate among those who those who actually enrolled in college after age 25. This completion rate increases far more rapidly, reaching just under 40% by age 50.
That the rate of completion varies substantially among adult undergraduates is made clear in Table 6.6. Here, I consider only the population actually exposed to the possibility of completion – those who enrolled at all after turning twenty-five. The completion rate is substantially higher for those who had previously enrolled prior to turning 25 than it is for those whose first college enrollment occurred after 25. The difference in completion between women and men is not statistically significant (at $p<.05$), nor is that between whites and Latinos, but it is between whites and blacks. Parental education and family income in the base year are also associated with higher completion probability, as are higher AFQT scores and higher high school grades. Individuals who had expected to complete college in the initial 1979 interview were more likely to complete as adults, but those who never expected to complete actually did so at a rate of about 30%. Those whose best friend planned to attend college in the base year also were more likely to eventually complete than those without college-bound friends. It should be noted that in only one subgroup – those in the top quartile of AFQT scores – does the completion rate clear 50%.

Figure 6.3. College enrollment and degree completion of those who reach age 25 without having earned a bachelor’s degree

![Graph showing college enrollment and degree completion by age](image-url)
Table 6.6. College completion rates among adult undergraduates (N=2,553)

<table>
<thead>
<tr>
<th></th>
<th>Proportion Earned BA</th>
<th>95% CI low</th>
<th>95% CI high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.3904</td>
<td>.3614</td>
<td>.4195</td>
</tr>
<tr>
<td>Enrolled before 25</td>
<td>.4543</td>
<td>.4197</td>
<td>.4889</td>
</tr>
<tr>
<td>First enrollment after 25</td>
<td>.2396</td>
<td>.1902</td>
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</tr>
<tr>
<td>Female</td>
<td>.4040</td>
<td>.3648</td>
<td>.4431</td>
</tr>
<tr>
<td>Male</td>
<td>.3745</td>
<td>.3314</td>
<td>.4177</td>
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<tr>
<td>White/Other</td>
<td>.3969</td>
<td>.3655</td>
<td>.4282</td>
</tr>
<tr>
<td>Latino</td>
<td>.3379</td>
<td>.2805</td>
<td>.3954</td>
</tr>
<tr>
<td>Black</td>
<td>.3049</td>
<td>.2598</td>
<td>.3499</td>
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</table>

Parental Education

<table>
<thead>
<tr>
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<th>Proportion Earned BA</th>
<th>95% CI low</th>
<th>95% CI high</th>
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</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>.3241</td>
<td>.2587</td>
<td>.3894</td>
</tr>
<tr>
<td>High School</td>
<td>.3542</td>
<td>.3105</td>
<td>.3980</td>
</tr>
<tr>
<td>Some College</td>
<td>.4356</td>
<td>.3636</td>
<td>.5076</td>
</tr>
<tr>
<td>Bachelor’s/Higher</td>
<td>.4902</td>
<td>.4262</td>
<td>.5541</td>
</tr>
</tbody>
</table>

Household Income Tercile

<table>
<thead>
<tr>
<th></th>
<th>Proportion Earned BA</th>
<th>95% CI low</th>
<th>95% CI high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest)</td>
<td>.3657</td>
<td>.3001</td>
<td>.4312</td>
</tr>
<tr>
<td>2</td>
<td>.3466</td>
<td>.2944</td>
<td>.3989</td>
</tr>
<tr>
<td>3</td>
<td>.4256</td>
<td>.3846</td>
<td>.4666</td>
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</tbody>
</table>

AFQT quartile

<table>
<thead>
<tr>
<th></th>
<th>Proportion Earned BA</th>
<th>95% CI low</th>
<th>95% CI high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest)</td>
<td>.1825</td>
<td>.0866</td>
<td>.2783</td>
</tr>
<tr>
<td>2</td>
<td>.2426</td>
<td>.1834</td>
<td>.3018</td>
</tr>
<tr>
<td>3</td>
<td>.3531</td>
<td>.3048</td>
<td>.4014</td>
</tr>
<tr>
<td>4</td>
<td>.5026</td>
<td>.4568</td>
<td>.5483</td>
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</table>

High School Grades Quartile

<table>
<thead>
<tr>
<th></th>
<th>Proportion Earned BA</th>
<th>95% CI low</th>
<th>95% CI high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest)</td>
<td>.2977</td>
<td>.2181</td>
<td>.3774</td>
</tr>
<tr>
<td>2</td>
<td>.3217</td>
<td>.2620</td>
<td>.3813</td>
</tr>
<tr>
<td>3</td>
<td>.3856</td>
<td>.3345</td>
<td>.4366</td>
</tr>
<tr>
<td>4</td>
<td>.4766</td>
<td>.4252</td>
<td>.5280</td>
</tr>
</tbody>
</table>

Graduation expected (1st int) | Proportion Earned BA | 95% CI low | 95% CI high |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduation not expected</td>
<td>.5075</td>
<td>.4646</td>
<td>.5504</td>
</tr>
<tr>
<td>Best friend college plans</td>
<td>.2910</td>
<td>.2535</td>
<td>.3285</td>
</tr>
<tr>
<td>Best friend no college plans</td>
<td>.4565</td>
<td>.4152</td>
<td>.4978</td>
</tr>
</tbody>
</table>

Source: NSLY-79

The estimates in Table 6.6 are bivariate statistics; in Table 6.7 I present a multivariate regression predicting completion. Again, included in this analysis are those who ever enrolled in higher education.
as undergraduates after age 25. The outcome variable is ever completing a degree; as it is a binary outcome I use logistic regression and present odds-ratios rather than logits to ease interpretation. All variables are measured prior to or at age 25; I here seek to predict degree completion among this population as a whole, not on a year-by-year basis.

In Model 1, I introduce demographic and socioeconomic background measures. Though women graduate at slightly higher rates, neither the gender nor race variables attain statistical significance. Socioeconomic background\textsuperscript{71} is, however, positively associated with the odds of completion. In model 2 I introduce measures of academic performance and high school social environment. Their inclusion mediates entirely the influence of social origins, but raises that of gender. Though the effects of all variables are in the expected directions, only cognitive scores and college expectation are statistically significant predictors of completion among adult students. Next, I include variables describing college and family history. The number of prior enrollments, not surprisingly, strongly predicts completion – individuals who were closer to finishing at 25 were more likely to do so. But net of this, the age when one first enrolled doesn’t seem to matter. Finally, I include two measures of labor market history: cumulative experience and tenure at one’s job by age 25. While specific job-tenure doesn’t seem to impact completion, having more extensive early job experience seems to reduce the chances of earning a degree after 25.

These results are largely consistent with the studies cited earlier, but they present two findings of interest. First, the effect of gender emerges only after controlling for other factors, and it grows progressively stronger as more covariates are included. That is, these covariates do not explain the female advantage in completion. Women are not more likely to complete college as adults because they were better students in high school, nor because they enrolled earlier and more frequently, nor because

\textsuperscript{71} SES is here measured through a scale which combines parental education, household income (in 1979), and parental occupational prestige (Duncan SEI scores, 1979 version).
they accumulated less work experience. Rather, they are more likely to complete net of these considerations. Secondly, I find, contra Taniguchi and Kaufman, that the length of delayed entry into college does not have predictive value independent of the number or enrollments prior to 25, suggesting that delaying college by itself doesn’t hurt changes of completion as an adult.

Table 6.7. Logistic regression predicting degree completion among returning adult students

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latino</td>
<td>0.968</td>
<td>1.160</td>
<td>1.029</td>
<td>0.962</td>
</tr>
<tr>
<td></td>
<td>(0.165)</td>
<td>(0.238)</td>
<td>(0.218)</td>
<td>(0.206)</td>
</tr>
<tr>
<td>Black</td>
<td>0.865</td>
<td>1.072</td>
<td>0.981</td>
<td>0.867</td>
</tr>
<tr>
<td>(ref=White)</td>
<td>(0.130)</td>
<td>(0.216)</td>
<td>(0.204)</td>
<td>(0.186)</td>
</tr>
<tr>
<td>Female</td>
<td>1.208</td>
<td>1.437**</td>
<td>1.545***</td>
<td>1.604***</td>
</tr>
<tr>
<td></td>
<td>(0.165)</td>
<td>(0.204)</td>
<td>(0.223)</td>
<td>(0.234)</td>
</tr>
<tr>
<td>SES</td>
<td>1.398***</td>
<td>1.056</td>
<td>0.977</td>
<td>0.995</td>
</tr>
<tr>
<td></td>
<td>(0.123)</td>
<td>(0.100)</td>
<td>(0.0942)</td>
<td>(0.0964)</td>
</tr>
<tr>
<td>AFQT</td>
<td>1.018***</td>
<td>1.016***</td>
<td>1.016***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00371)</td>
<td>(0.00377)</td>
<td>(0.00381)</td>
<td></td>
</tr>
<tr>
<td>HS grades</td>
<td>1.009</td>
<td>0.996</td>
<td>1.007</td>
<td>0.996</td>
</tr>
<tr>
<td></td>
<td>(0.0968)</td>
<td>(0.0963)</td>
<td>(0.0974)</td>
<td></td>
</tr>
<tr>
<td>Dropped out of HS</td>
<td>0.727</td>
<td>0.949</td>
<td>0.851</td>
<td>0.906</td>
</tr>
<tr>
<td></td>
<td>(0.187)</td>
<td>(0.251)</td>
<td>(0.218)</td>
<td></td>
</tr>
<tr>
<td>Best friend college plans</td>
<td>1.181</td>
<td>1.070</td>
<td>1.058</td>
<td>1.058</td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td>(0.168)</td>
<td>(0.167)</td>
<td></td>
</tr>
<tr>
<td>School disadvantage</td>
<td>1.015</td>
<td>1.072</td>
<td>1.063</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>(0.104)</td>
<td>(0.112)</td>
<td>(0.111)</td>
<td></td>
</tr>
<tr>
<td>College completion expected (1st int.)</td>
<td>1.912***</td>
<td>1.544***</td>
<td>1.492**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.290)</td>
<td>(0.253)</td>
<td>(0.247)</td>
<td></td>
</tr>
<tr>
<td>Age 1st PSE enrollment</td>
<td>0.993</td>
<td>0.989</td>
<td>0.989</td>
<td>0.989</td>
</tr>
<tr>
<td></td>
<td>(0.0165)</td>
<td>(0.0165)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of enrolled before 25</td>
<td>1.246***</td>
<td>1.240***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0586)</td>
<td>(0.0582)</td>
<td></td>
<td></td>
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<tr>
<td>Had a child by 25</td>
<td>0.805</td>
<td>0.735*</td>
<td>0.735*</td>
<td>0.735*</td>
</tr>
<tr>
<td></td>
<td>(0.124)</td>
<td>(0.117)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job tenure at 25 (weeks)</td>
<td>0.999</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.000826)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work experience at 25 (years)</td>
<td>0.904***</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0349)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.272***</td>
<td>0.111***</td>
<td>0.138***</td>
<td>0.238**</td>
</tr>
<tr>
<td></td>
<td>(0.0700)</td>
<td>(0.0463)</td>
<td>(0.0953)</td>
<td>(0.172)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,221</td>
<td>2,221</td>
<td>2,221</td>
<td>2,221</td>
</tr>
</tbody>
</table>

Source: NSLY79; *p<.05, **p<.01, ***p<.001
Fixed-effects Models: Enrollment and Earnings

I proceed now to investigate the effects of higher education in adult years on earnings, beginning by estimating the impact of enrollment shy of a bachelor’s degree. As was just made clear, though a considerable proportion of adults who enroll in college earn bachelor’s degrees, most do not, and it is relevant to ask whether college attendance has any positive impact for those who do not complete a degree. I leave aside the matter of education being intrinsically beneficial, which many of my interview respondents indicated, and focus instead on matters of cold cash: does going to school short of earning a bachelor’s degree raise one’s income?

Table 6.8 presents findings from a fixed-effects model regressing (log) personal earnings (for a given year) on a running count of years in which an enrollment occurred (after age 25) and a series of statistical controls. The enrollment-count is lagged, so that an additional year of enrollment in year $t$ adds to the running count only in year $t+1$. I include in this analysis all person-years in which respondents were 25 or older, had completed a high school degree or equivalent but not a bachelor’s degree (to ensure that I am not capturing effects of later-life GED classes), have valid responses for earnings, and were primarily employed. As with prior analyses, individuals who dropped out of the survey before their 35th birthday are excluded, and I employ a population-weight which corrects for this attenuation. In addition to the standard Mincer equation controls (tenure, experience, and age as quadratic terms) and measures of marital status and the age of one’s youngest child, I also include a dummy variable for person-years in which a respondent was actively enrolled in college. I do so because individuals frequently reduce their work hours – and thus their earnings - in order to attend school. Unsurprisingly, this variable has a sharp negative impact, reducing earnings from between 5-13% - and has a particularly large effect for males. Effects of these control variables are mostly in the expected directions.
Table 6.8. Fixed-effects models estimating the effects of enrollment in college shy of a bachelor’s degree on earnings

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) All Cases</th>
<th>(2) Females</th>
<th>(3) Males</th>
<th>(4) Whites</th>
<th>(5) Blacks</th>
<th>(6) Latinos</th>
<th>(7) Parents No College</th>
<th>(8) Parents College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult enrollment (cumulative)</td>
<td>0.0319***</td>
<td>0.0263***</td>
<td>0.0272***</td>
<td>0.0309***</td>
<td>0.0485***</td>
<td>0.0121</td>
<td>0.0338***</td>
<td>0.0277***</td>
</tr>
<tr>
<td>(0.00496)</td>
<td>(0.00692)</td>
<td>(0.00712)</td>
<td>(0.00686)</td>
<td>(0.0100)</td>
<td>(0.00987)</td>
<td>(0.00601)</td>
<td>(0.00929)</td>
<td></td>
</tr>
<tr>
<td>Enrolled in current year</td>
<td>-0.0633***</td>
<td>-0.0444</td>
<td>-0.101***</td>
<td>-0.0640**</td>
<td>-0.0643</td>
<td>-0.0386</td>
<td>-0.0546**</td>
<td>-0.0746**</td>
</tr>
<tr>
<td>(4.19e-05)</td>
<td>(6.68e-05)</td>
<td>(5.37e-05)</td>
<td>(5.61e-05)</td>
<td>(9.72e-05)</td>
<td>(9.000103)</td>
<td>(4.65e-05)</td>
<td>(9.48e-05)</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>0.000745***</td>
<td>0.000978***</td>
<td>0.000592***</td>
<td>0.000708***</td>
<td>0.001022***</td>
<td>0.000769***</td>
<td>0.000747***</td>
<td>0.000766***</td>
</tr>
<tr>
<td>(2.82e-08)</td>
<td>(4.63e-08)</td>
<td>(3.56e-08)</td>
<td>(3.71e-08)</td>
<td>(7.22e-08)</td>
<td>(7.69e-08)</td>
<td>(3.13e-08)</td>
<td>(6.39e-08)</td>
<td></td>
</tr>
<tr>
<td>Work experience</td>
<td>0.00312***</td>
<td>0.00407***</td>
<td>0.00209***</td>
<td>0.00338***</td>
<td>0.00237***</td>
<td>0.00283***</td>
<td>0.00298***</td>
<td>0.00330***</td>
</tr>
<tr>
<td>(0.000117)</td>
<td>(0.000173)</td>
<td>(0.000161)</td>
<td>(0.000164)</td>
<td>(0.000219)</td>
<td>(0.000266)</td>
<td>(0.000129)</td>
<td>(0.000271)</td>
<td></td>
</tr>
<tr>
<td>Work experience2</td>
<td>-8.60e-07</td>
<td>-1.12e-06</td>
<td>-5.41e-07</td>
<td>-9.31e-07</td>
<td>-7.12e-07</td>
<td>-9.70e-08</td>
<td>-8.80e-08</td>
<td>-7.52e-08</td>
</tr>
<tr>
<td>(4.11e-08)</td>
<td>(6.34e-08)</td>
<td>(5.46e-08)</td>
<td>(5.72e-08)</td>
<td>(8.50e-08)</td>
<td>(9.31e-08)</td>
<td>(4.50e-08)</td>
<td>(9.72e-08)</td>
<td></td>
</tr>
<tr>
<td>Separated</td>
<td>0.0235</td>
<td>0.000568</td>
<td>0.00175</td>
<td>0.0367</td>
<td>-0.0368</td>
<td>0.108*</td>
<td>-0.0253</td>
<td>0.133**</td>
</tr>
<tr>
<td>(0.00248)</td>
<td>(0.00394)</td>
<td>(0.0322)</td>
<td>(0.0340)</td>
<td>(0.0505)</td>
<td>(0.0589)</td>
<td>(0.0284)</td>
<td>(0.0525)</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>-0.00425</td>
<td>-0.0673</td>
<td>-0.651</td>
<td>-0.00376</td>
<td>-0.623</td>
<td>0.346</td>
<td>0.0227</td>
<td>-0.147</td>
</tr>
<tr>
<td>(0.00803)</td>
<td>(0.0946)</td>
<td>(0.157)</td>
<td>(0.109)</td>
<td>(0.155)</td>
<td>(0.235)</td>
<td>(0.0892)</td>
<td>(0.181)</td>
<td></td>
</tr>
<tr>
<td>Youngest child&lt;6</td>
<td>-0.0110</td>
<td>-0.00429</td>
<td>-0.0341</td>
<td>-0.0211</td>
<td>-0.0146</td>
<td>0.107**</td>
<td>-0.0181</td>
<td>0.0132</td>
</tr>
<tr>
<td>(0.00203)</td>
<td>(0.0303)</td>
<td>(0.0276)</td>
<td>(0.0275)</td>
<td>(0.0446)</td>
<td>(0.0476)</td>
<td>(0.0226)</td>
<td>(0.0461)</td>
<td></td>
</tr>
<tr>
<td>Youngest child 6-10</td>
<td>-0.0655***</td>
<td>-0.163***</td>
<td>0.0137</td>
<td>-0.0676**</td>
<td>-0.0884**</td>
<td>-0.0199</td>
<td>-0.0912***</td>
<td>0.0159</td>
</tr>
<tr>
<td>(0.0194)</td>
<td>(0.0298)</td>
<td>(0.0258)</td>
<td>(0.0263)</td>
<td>(0.0434)</td>
<td>(0.0458)</td>
<td>(0.0218)</td>
<td>(0.0429)</td>
<td></td>
</tr>
<tr>
<td>Youngest child 11-18</td>
<td>-0.0823***</td>
<td>-0.259***</td>
<td>0.0287</td>
<td>-0.0907***</td>
<td>-0.0588</td>
<td>-0.0453</td>
<td>-0.0954***</td>
<td>-0.0441</td>
</tr>
<tr>
<td>(0.0165)</td>
<td>(0.0260)</td>
<td>(0.0213)</td>
<td>(0.0220)</td>
<td>(0.0395)</td>
<td>(0.0393)</td>
<td>(0.0188)</td>
<td>(0.0348)</td>
<td></td>
</tr>
<tr>
<td>Youngest child 18+</td>
<td>0.0518**</td>
<td>0.0736**</td>
<td>-0.0156</td>
<td>0.0308</td>
<td>0.0751</td>
<td>0.254***</td>
<td>0.0692***</td>
<td>-0.0196</td>
</tr>
<tr>
<td>(0.0256)</td>
<td>(0.0373)</td>
<td>(0.0353)</td>
<td>(0.0349)</td>
<td>(0.0538)</td>
<td>(0.0590)</td>
<td>(0.0281)</td>
<td>(0.0603)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.107***</td>
<td>-0.168***</td>
<td>-0.0398***</td>
<td>-0.128***</td>
<td>-0.0430***</td>
<td>-0.0391***</td>
<td>-0.0958***</td>
<td>-0.131***</td>
</tr>
<tr>
<td>(0.00968)</td>
<td>(0.0143)</td>
<td>(0.0132)</td>
<td>(0.0135)</td>
<td>(0.0182)</td>
<td>(0.0218)</td>
<td>(0.0107)</td>
<td>(0.0224)</td>
<td></td>
</tr>
<tr>
<td>Age2</td>
<td>0.00496***</td>
<td>0.000989***</td>
<td>-9.90e-05</td>
<td>0.000713***</td>
<td>-0.00177</td>
<td>0.000568**</td>
<td>0.000457***</td>
<td>0.000489*</td>
</tr>
<tr>
<td>(0.000114)</td>
<td>(0.000169)</td>
<td>(0.000154)</td>
<td>(0.000159)</td>
<td>(0.000217)</td>
<td>(0.000252)</td>
<td>(0.000125)</td>
<td>(0.000264)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>11.27***</td>
<td>12.09***</td>
<td>10.36***</td>
<td>11.59***</td>
<td>10.19***</td>
<td>10.93***</td>
<td>11.04***</td>
<td>11.78***</td>
</tr>
<tr>
<td>(0.159)</td>
<td>(0.234)</td>
<td>(0.217)</td>
<td>(0.220)</td>
<td>(0.309)</td>
<td>(0.363)</td>
<td>(0.176)</td>
<td>(0.361)</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.066</td>
<td>0.100</td>
<td>0.052</td>
<td>0.071</td>
<td>0.051</td>
<td>0.074</td>
<td>0.069</td>
<td>0.064</td>
</tr>
<tr>
<td>N</td>
<td>4,747</td>
<td>2,440</td>
<td>2,307</td>
<td>2,284</td>
<td>1,554</td>
<td>909</td>
<td>3,705</td>
<td>1,042</td>
</tr>
</tbody>
</table>

Source: NSLY-79; *p<0.05, **p<0.01, ***p<0.001

The first column reports fixed-effects estimates for the population as a whole, and indicates that having attended college in an additional year is related, on average, to an increase in yearly earnings of nearly 3%. This is, of course, an average effect in the population, and this could mask substantial
variance among sub-populations. Therefore, in the remaining columns, I compute effects of enrollment-years for subgroups defined by gender, race/ethnicity, and parental education. Surprisingly, estimates of the effect of additional enrollment are fairly stable across gender and parental education subgroups – everywhere between 2-4% per annum. Estimated effect sizes vary most strikingly by race: African-Americans seem to enjoy a larger than average earnings increase from additional schooling, while Latinos do not appear to benefit at all. The former effect is suggested by studies that show negative selection bias in schooling (Brand & Xie 2010; Card 1995), and may in part explain higher net enrollment probabilities for African-Americans (e.g. chapter 5), but the null finding for Latinos is puzzling.

It is possible that this is a result of a misspecification of the key independent variable. After all, a running count of years of enrollment includes both quick, purposeful enrollments which develop skills as well as the enrollments of individuals who perennially return to school but gain little from the process. This would imply that the effects of additional enrollments might be non-linear – greater in initial years and then tapering off; I investigate this possibility by modeling enrollment years with a quadratic term. Results, presented in Table 6.9, show strikingly negative initial returns to additional enrollment for Latinos, with a very small compensatory (positive) quadratic effect. This suggests that for Latinos in this particular age-cohort, the impact of initial adult enrollment was so negative that it would take 10 years for the quadratic effect to result in breaking even. Males also have a negative initial estimated effect, but it is very slight and the quadratic effect compensates after only two additional enrollment-years. For females, blacks, and individuals whose parents did not attend college, the quadratic impact is what is expected: large positive initial effects which wither out at larger numbers of years enrolled. A caution on the over-interpretation of these findings relative to those in the prior table is in order, however. An examination of the value of the $R^2$ statistics from both regressions shows that little is gained in terms of variance explained by the inclusion of the quadratic term in any of the analyses.
Table 6.9. Coefficients for linear and quadratic terms for enrollment years from fixed-effects models

<table>
<thead>
<tr>
<th></th>
<th>Enrollment-years</th>
<th>Enrollment years$^2$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>0.0348***</td>
<td>-0.000272</td>
<td>0.066</td>
</tr>
<tr>
<td></td>
<td>(0.00815)</td>
<td>(0.000654)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.0528***</td>
<td>-0.00275***</td>
<td>0.100</td>
</tr>
<tr>
<td></td>
<td>(0.0120)</td>
<td>(0.00101)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>-0.00114</td>
<td>0.00243***</td>
<td>0.052</td>
</tr>
<tr>
<td></td>
<td>(0.0124)</td>
<td>(0.000869)</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>0.0327***</td>
<td>-0.000169</td>
<td>0.071</td>
</tr>
<tr>
<td></td>
<td>(0.0117)</td>
<td>(0.009902)</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.0986***</td>
<td>-0.00492***</td>
<td>0.051</td>
</tr>
<tr>
<td></td>
<td>(0.0182)</td>
<td>(0.00149)</td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>-0.0390***</td>
<td>0.00425***</td>
<td>0.075</td>
</tr>
<tr>
<td></td>
<td>(0.0168)</td>
<td>(0.00114)</td>
<td></td>
</tr>
<tr>
<td>Parents No College</td>
<td>0.0445***</td>
<td>-0.00110</td>
<td>0.069</td>
</tr>
<tr>
<td></td>
<td>(0.0102)</td>
<td>(0.000848)</td>
<td></td>
</tr>
<tr>
<td>Parents College</td>
<td>0.0225</td>
<td>0.000434</td>
<td>0.064</td>
</tr>
<tr>
<td></td>
<td>(0.0165)</td>
<td>(0.00114)</td>
<td></td>
</tr>
</tbody>
</table>

Source: NSLY79; *p<.05, **p<.01, ***p<.001

Marginal Structural Models for the Effects of Bachelor’s Attainment

Next, I approach the question of the causal effect of bachelor’s degree attainment in adulthood on the probability of employment and on wages. As discussed above, I employ logged inverse probability of treatment weights to generate a pseudo-population of person-years in which years of exposure and years of non-exposure to a bachelor’s degree are balanced in terms of a large set of covariates. The strength of this approach is that, in constructing counterfactual units for person-years in which a bachelor’s degree is held, it draws upon both data from the individuals themselves prior to earning a BA as well as from individuals who are otherwise similar but never earned a BA. In essence, it mixes the strengths of both fixed-effects and propensity score matching approaches for identifying treatment effects.

Included in this analysis are all person-years in which individuals were 25 years of age or older, and had at least a high school degree but no more than 16 years of completed education; I want to capture the effects of the bachelor’s degree alone, without confounding it with the effects of post-
baccalaureate education. As in prior analysis, I drop cases who exited the survey prior to age 35. And for analyses where the estimand is not employment status, I also include only person-years in which respondents were employed for all or most of the year.

After applying logged IPT weights, MSMs estimate effects using standard regression techniques – OLS in the case of continuous outcomes, logistic regression for dichotomous outcomes. Because not all of the variables were balanced between exposed and unexposed units in the IPTW-generated pseudo-population, I include the following variables as controls in the regressions: age (linear and quadratic), work experience (linear and quadratic), and a set of dummy variables for the age of the respondent’s youngest child. In addition, as in the fixed-effects models above, a dummy variable flagging years in which a respondent was enrolled in college is included. Since there are multiple observations per individual which are cannot be thought of as independent, robust and clustered standard errors are employed.

Table 6.8 provides estimates of the effects of the causal effects of earning a BA in adult years for the full population, and separately by gender. Interestingly, the effect of having a bachelor’s degree on labor market status is close to zero. This directly contradicts commonplace wisdom, cross-sectional empirical results, and adult student hopes to gain more stable employment after earning a bachelor’s degree. This may indicate that cross-sectional findings are characterized by positive selection bias. It also may indicate that adult students in particular see very little benefit in terms job access from degree attainment, either because employers are more interested in their job experience or because of a prejudice against individuals who graduate at older ages. Turning to earnings, however, indicates that bachelor’s degree attainment at age 25 or later is related to earnings which are 19% higher per year on average. When we look at this earnings effect separately by gender, however, we see that the positive effect on earnings is confined entirely to females. There is previous evidence that suggest that women benefit more from a bachelor’s degree than do men (DiPrete & Buchman 2006; Dougherty 2005), but in
general the estimated effect for males is not zero. This result suggests, however, that among males who are unlikely to return to college (and who are up-weighted here), the return is small to non-existent.

Table 6.10. MSM estimates of the effect of bachelor’s attainment among adults on labor market outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Full Sample</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>1.093 (.1454)</td>
<td>1.012 (.1723)</td>
<td>1.018 (.2354)</td>
</tr>
<tr>
<td>Income</td>
<td>.1892 (.0739)**</td>
<td>.2798 (.0993)**</td>
<td>.0064 (.0869)</td>
</tr>
<tr>
<td>Health benefits</td>
<td>1.353 (.1860)*</td>
<td>1.408 (.2605)+</td>
<td>1.280 (.2641)</td>
</tr>
<tr>
<td>Childcare benefits</td>
<td>1.061 (.1890)</td>
<td>1.082 (.2292)</td>
<td>1.049 (.3368)</td>
</tr>
<tr>
<td>Flexible Schedule</td>
<td>1.225 (.1478)+</td>
<td>1.019 (.1642)</td>
<td>1.634 (.3013)**</td>
</tr>
<tr>
<td>Profit-sharing</td>
<td>1.063 (.1328)</td>
<td>1.069 (.1703)</td>
<td>1.066 (.2206)</td>
</tr>
<tr>
<td>Maternity/Paternity leave</td>
<td>1.391 (.1735)**</td>
<td>1.583 (.2681)**</td>
<td>1.195 (.2121)</td>
</tr>
<tr>
<td>Education benefit</td>
<td>1.303 (.1542)*</td>
<td>1.394 (.2016)*</td>
<td>1.102 (.2207)</td>
</tr>
<tr>
<td>Dental benefit</td>
<td>1.618 (.2068)***</td>
<td>1.589 (.2616)**</td>
<td>1.603 (.3212)*</td>
</tr>
<tr>
<td>Retirement plan</td>
<td>1.296 (.1704)**</td>
<td>1.371 (.2259)+</td>
<td>1.111 (.2412)</td>
</tr>
<tr>
<td>Paid vacation</td>
<td>1.267 (.1581)+</td>
<td>1.330 (.2104)+</td>
<td>1.167 (.2325)</td>
</tr>
<tr>
<td>Paid sick leave</td>
<td>1.587 (.1949)***</td>
<td>1.700 (.2629)**</td>
<td>1.407 (.2779)+</td>
</tr>
<tr>
<td>Overall job satisfaction</td>
<td>1.012 (.1757)</td>
<td>.8395 (.2032)</td>
<td>1.367 (.3239)</td>
</tr>
</tbody>
</table>

Source: NSLY79; +p<.10, *p<.05, **p<.01, ***p<.001

Moving on, I estimate non-wage employment-based returns to a bachelor’s degree. For both males and females, earning a bachelor’s degree has no estimated impact on overall satisfaction with one’s job. As noted above, prior research on this relationship has produced inconsistent results. What seems to be occurring in this case is that most respondents – upwards of 90% in most survey-years – said that they found their job either “very satisfying” or “somewhat satisfying”, and I coded both responses together. One can interpret the high degree of professed job satisfaction in various ways – as social desirability bias, as resulting from a cultural tendency towards positive thinking, or as a genuine satisfaction of most people with their jobs. But the low level of variance in this response virtually guarantees a null result.

On the whole, earning a college degree appears to increase access to non-wage benefits substantially. College grads have 35% higher odds of having health insurance, 60% higher odds of dental...
care, 59% higher odds of paid sick leave, and 30% higher odds of both a retirement plan and of education benefits. Again, however, women appear to benefit quite a bit more than men. For men, statistically-significant increases in benefits are found for three measures: access to paid sick leave (p<.10), flexible scheduling, and dental insurance. Flexible scheduling is the outlier here, for only in terms of this variable is it estimated that men benefit more than women from completing a bachelor’s degree. Women appear to benefit more than men in terms of access to parental leave, education benefits, paid sick leave, paid vacation, health benefits, and retirement plans.

Discussion and Conclusion

In this chapter, I have asked whether enrolling in college pays off for adults without college degrees. The answer appears to be on the whole it does. Roughly 40% of adults who enroll manage to earn a bachelor’s degree, though rates of completion vary among adults in much the same manner that they do among younger undergraduates – by gender, social privilege, and academic background. Fixed-effects estimates show that for most groups of adult undergraduates, an additional year of college attendance is on average related to 2-4% higher yearly earnings, even without completing a degree. The economic benefits of such attendance are similar among men and women, whites and blacks, first-generation college-goers and those whose parents went to college. Latinos are the exception here – my estimates show null or even negative effects of enrollment for this group.

Estimates of the economic return to a bachelor’s degree are similarly positive. Among adults who reached 25 without a college degree, those who subsequently complete one earn 19% more on average per year. I also estimate considerable gains in access to crucial non-wage benefits. Net of other factors, earning a college degree increases one’s odds of having health and dental benefits, a retirement plan, paid sick leave, parental leave, and further education benefits, though it appears to have little impact on employment or overall job satisfaction.
Digging a little deeper suggests a more complicated story, especially when we examine gender differences. Fixed-effects models suggested that while women enjoy an immediate boost from returning to college, for men the initial impact is very small, and only after multiple years of enrollment do wages appear to be positively influenced by additional schooling. Moreover, I found that the negative impact of actually being enrolled in college in a given year is twice as large for men as it is for women in relative terms. Finally, it appears that the effect of completing a degree on wages is far larger for women than it is for men; I estimated a null effect among men, but an wage gain of nearly 30% among women. Females also appeared to benefit more in terms of access to benefits, though I did find gains in non-wage benefits for men as well. Taken together, the more limited gains and more substantial costs of enrolling in college for adult men could help to explain both the lower probability of enrolling in college which I found in Chapter 1, as well as males’ lower probability of completing a degree.

Part of the reason for smaller gains is suggested by Table 6.1, which shows that men’s overall access to certain benefits - in particular, health insurance, retirement plans, and paid vacation – is higher than that of women. And, of course, men have higher overall earnings. Women, is would seem, have more to gain by returning to school than do men - they can ascend from so-called “pink collar” jobs to white-collar jobs and transition into higher-paying fields and industries. Of course, over the past 40 years, earnings and job quality have been stagnating for less-educated men. As this process has deepened, it has been eroding the last remnants of the blue-collar “breadwinner” model in which men were paid enough to provide for their families on the strength of their paycheck alone. And over this time, women have utilized the higher educational system in order to obtain access to benefits for themselves, while in prior generations they would have been restricted to gaining access through their husbands’ jobs.
Another possibility is that mid-career men have greater difficulty translating education into job improvements. Prior work experience may be weighted more than education by employers in men’s career narratives, resulting in a more stereotyped assessment of their ability. Incomplete earlier education could be held against men, as evidence of behavioral difficulties or general lack of discipline or aptitude, whereas it is possible that women’s incomplete educations could be presumed to be a result of early childbearing or marriage – factors beyond the individual’s control which quashed early potential. Perhaps later-life education is stigmatized more for men, held to be suggestive of restlessness, discontentment, and lack of clear direction and self-control. It could be, as well, that there are real differences between the men and women who happen to earn a BA after age 25 in terms of observable and unobservable characteristics which produces these results.

There are two policy implications of the findings in this chapter. Does it provide evidence that going to college can benefit older students? The balance of the evidence in this chapter suggests that such enrollment is indeed beneficial. But should access to higher education to be relied upon solely to provide material security to those who presently lack it? Findings in this chapter do not suggest that the higher educational sector can be asked to bear the full weight of this societal task. Open-access institutions provide many with opportunity, and a number with the means for advancement. But opportunity ought not to be confused with security; higher education can certainly provide the former, but it is ill-suited to deliver the latter.
Conclusion

We are now firmly in the era of mass higher education that dawned in the decades immediately after World War 2. Since this time, colleges have collectively enrolled a larger and larger number of people each year, and the number of people in the population who have ever enrolled has grown faster still. Today, as a result, higher education as a sector has an immense social and political reach, and is indisputably more central to life than ever previously. And yet it seems at the same time, perversely, to be more troubled, vulnerable, and unstable than ever before.

The expansion of college higher education has, over time, progressively altered how it functions as a total system, and this is nowhere more evident than in the area of financing. As enrollments have increased, the sector has as a whole become more and more costly. This cost increase was inevitable, even if per-student costs had held constant (which they decidedly have not). But since the late 1970s, the public has become increasingly allergic to taxation at both the state and federal levels, and state governments have confronted increasing budgetary demands in the areas of corrections, Medicaid, and K-12 education. State governments have thus been faced with ever-expanding demand for college while the revenue enabling them to meet this demand has dwindled. The unavoidable result is a slow withdrawal by the states from a commitment to fully fund higher education for all citizens who desire it, and by implication from the notion that access to higher education is both a right and a public good. Meanwhile, a similar process has occurred at the federal level: total Pell grant expenditures have continued to climb, reflecting expanded enrollment, while the real value of the average Pell grant has fallen. The result of both developments is a slow transfer of the burden of paying for college from the taxpaying public as a whole to individual students and their families.

A second consequence of systemic expansion is the diversification of the aggregate college student body. Enrollment in college has always, historically, been a joint function of socioeconomic
privilege and prior academic performance. The expansion of higher education means, then, the extension of its reach further down the continua of both socioeconomic status and academic preparation. As a result, over time the marginal college student has become both poorer and less academically prepared for college in relative terms. Since colleges are enrolling more economically distressed students, a greater proportion has been eligible for financial aid, which is another factor driving up the cost of the Pell program and of state need-based aid programs. Without adequate aid, a greater proportion of students encounter economic difficulties which lead them to delay, interrupt, or abandon their education. And since colleges are enrolling less-prepared students, they must devote more resources to developmental skills programs in math, reading, and writing (Long & Boatman 2013).

This diversification in terms of socioeconomic status and academic performance has led to diversification across numerous other dimensions. Racial/ethnic diversification, particularly at elite college has, of course, been the subject of a great deal of scholarly interest (Bowen & Bok 1998; Karabel 2005; Feagin, Vera, & Imani 1996), but there has been relatively little attention given to other forms of diversification (Diel-Amen 2015), such as those according to parenthood, marital status, working status, type of orientation towards college, full/part time status, prior life history, sexuality, first language and, as this dissertation has emphasized, age. At the same time, “pathways” through college have also become more varied, involving increased inter-institutional transfer, delayed enrollment, multiple enrollment spells, and the combination of school with work and other responsibilities. The diversification of college pathways is both the result of demographic diversification and a net contributor to it. On the one hand, demographic diversification increases the prevalence of non-standard enrollment trajectories because disadvantaged and non-traditional students disproportionately adopt such pathways in order to make college more affordable (Goldrick-Rab 2006). But non-standard enrollment contributes to demographic diversification because delayed, interrupted and part-time enrollment extends college-going into periods of life when individuals are older, have
children and more extensive work responsibilities. Statistically speaking, today there is no longer a “typical” college student, nor is there a truly typical pathway through college - though cultural norms regarding what college students and trajectories should look like retain immense power in the collective imagination (Attewell & Lavin 2012; Diel-Amen 2015; Quinnan 1997).

As I stressed in Chapter 1, the multidimensional diversification of higher education has definitively not occurred evenly throughout the system. Instead, as it expanded, higher education has become increasingly stratified and segregated, in effect insulating ‘traditional’ students and institutions from the diversity which characterizes the system as a whole. As result, wealthy, highly prepared students still attend school with students mostly like themselves, and elite institutions continue to serve relatively homogenous student bodies. Within the ivory tower, then, there is another, rarer ivory tower, a citadel of achievement and privilege that has grown more inaccessible to and removed from the majority of the population precisely as this majority has begun enrolling in college. It is the cultural power of the elite sector, its ability to represent itself to itself and to the rest of the world as identical with higher education as a whole, which has permitted us to fail to perceive the dramatic remaking of American higher education which has unfolded before our eyes over the past half-century.

Scholars have developed two influential theoretical models of the impacts of educational expansion on educational inequality: maximally maintained inequality (MMI) and effectively maintained inequality (EMI). Both models are consistent with the broad trends characterizing American higher education, but slight discrepancies between theory and reality are suggestive. MMI, proposed by Raftery and Hout (1993), proposes that educational access can increase within each socioeconomic stratum without affecting relative differences in participation between strata. Instead, MMI predicts that class advantages in any given level of education will tend to remain constant in magnitude.

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72 Elite institutions have, since 1970, truly only diversified appreciably in terms of race, ethnicity, and gender; this probably accounts for the near-exclusive focus on these dimensions of diversification in both the popular media and in academic scholarship.
throughout expansion until the more privileged group approaches near-universal participation, or “saturation”, at that level. At that point, but only at that point, will the gap between classes begin to narrow, while simultaneously the better-off class will increasingly enroll in a still higher level of education. In the American experience, college enrollment has become near-universal among the upper and middle classes, and lower-SES individuals have begun to narrow this gap. Meanwhile, the better-off have in recent decades enrolled in ever-larger numbers in graduate programs. However, in a pattern that complicates MMI, the gap in higher educational completion has actually appeared to widen over recent decades while the enrollment gap has narrowed (Bailey & Dynarski 2011). In fact, the process described by MMI appears in some ways stalled by declining rates of college completion among lower-SES enrollees.

EMI, proposed by Samuel Lucas (2001), predicts that as participation among the upper classes at a given educational level approaches saturation, and as participation among lower strata begins to catch up, this level will itself undergo hierarchical differentiation. In high schools, this takes the form of official or unofficial tracking; the children of the better-off will be increasingly separated into college-preparatory classes or their modern equivalent (honors, advanced placement and early college exposure classes). But undergraduate education is perhaps a better example of this process: the very expansion of higher education occurred through increasing vertical stratification. However, this did not occur through the creation of new, privileged niches at the top of the spectrum, as generally predicted by EMI. Instead, new layers were added or expanded at the bottom of the hierarchy, permitting the existing institutions to continue restricting themselves to serving elite institutions. This particular form of systemic change likely came about because the high value of the existing institutions— their institutional wealth, their networks of powerful donors, the symbolic value of their names— rendered them desirable to maintain as they were.
I have aimed in this dissertation to contribute to shifting attention away from this elite sector and towards what Attewell and Lavin (2012) called “the other 75%” of higher education. I have focused on one non-elite subgroup – adult students – for two reasons. First, adult students are both a significant and substantial population in their own right, accounting for two in every five college-goers. Second, their experiences are able to shed light on the state of mass higher education as a whole. Adult students teach us that though college takes place in the lives of more people, it has an exclusive claim to attention of a smaller and smaller proportion. Today’s modal college student sets foot on a campus no more than a few days a week and spends most of their time involved in non-academic pursuits. College is also no longer confined to a particular place the life-course; instead, today’s college student weaves her way back and forth between college and work, frequently combining the two. In other words, though college has a greater impact on the rest of society than ever before, the rest of society has, today, a greater impact on college as well. The walls of the ivory tower have become, shall we say, highly permeable.

**Key Findings**

There are a number of stories which emerge from this dissertation, and here I will focus on three: higher education and the economic security of the working class, the female advantage in non-traditional enrollment and completion, and the complex role of higher education in a transformed life-course.

I noted, in Chapter 1, that the enrollment of adult undergraduates cannot be understood without reference to the worsening labor market situation of workers without a college degree. The ultimate causes of this deterioration are not entirely agreed upon, but most likely include technological changes which have increased demand for “skilled” workers and eliminated many blue-collar jobs (Goldin & Katz 2008; Rifkin 1996), the falling value of the minimum wage (Card & DiNardo 2002; Fortin &
Lemieux 1997), de-industrialization (Harrison & Bluestone 1988; Neilsen & Alderson 1997), the slow withering the labor movement (Fortin & Lemieux 1997; Western & Rosenfeld 2011), and global economic integration (Alderson & Neilson 2002). The expansion of the proportion of the population holding a college degree, or having at least attended college, may contribute as well by permitting employers to demand higher levels of education for jobs which previously did not have such requirements.

It is reasonable to suspect that less-educated individuals might respond to deteriorating circumstances by returning to college, but this has not been the subject of much direct inquiry. Suggestive evidence supporting this contention appeared in a number of places in this dissertation. In Chapter 4 I tested the hypothesis that the return to college was predicted by an involuntary job loss in the prior year. Results showed that, indeed, losing one's job to layoff or termination increased the odds of returning to college by 16% net of other factors. This effect was observed for both women and men, but seemed slightly larger among women. The same chapter suggested that individuals were more likely to enroll in college during recessionary years, and in years when the return to a college degree was larger. Some evidence supporting an inverse connection between economic growth and adult college enrollment also appeared in the first chapter. The increase in enrollment rates for both males and females generally tracked downturns in the performance of the economy, and spiked after the onset of the 2007 financial crisis. Granted, these findings only indicate that there is likely a degree to which adult enrollment is a response to economic hardship, not precisely that the falling wages of the less-educated play a role in bringing people back to school per se.

More direct evidence was gathered through interviews and summarized in Chapter 5. Most interview subjects believed that a college degree was necessary to secure a decent job, said they had struggled economically in recent years, and believed that earning a degree would improve their situation economically. I noted that in believing that a college degree is necessary for a “good” job, the
respondents were merely reflecting an increasingly common belief in the general population as well as what economists have fairly firmly established. Secondly, difficult experiences in the labor market were cited by a number of respondents as directly motivating their return to college. Such experiences appeared to be particularly pronounced for respondents whose labor market experience was mostly in the retail sector. Importantly, most interview subjects who cited harsh labor market conditions as motivating their enrollment had not specifically been laid off or fired recently, but had been driven back to school through more subtle processes: chronically low pay, insufficient hours, demeaning working conditions, being passed over for full-time employment. This indicates that most likely my analysis in Chapter 4 dramatically underestimates the role of economic security in spurring enrollment in college, since in that chapter I operationalized insecurity only in terms of recent involuntary job loss.

The effect of the declining labor market for high school graduates is even more subtle, however, because it is mediated by cohort replacement and the shifting socialization of the young. More recent generations of college students have come of age during the period of “college for all”, and the necessity of going to college was emphasized to them. Most younger people without college education do not discover the difficult labor market on their own; this is generally what teachers and family members told them, at great length, they would encounter. As a result, most members of more recent cohorts had internalized the idea that they needed to go to college in order to avoid a difficult life, but this was only one of the reasons they had for going. As was discussed in Chapter 2, an ambivalent orientation to college, combined with few alternative occupational routes, resulted for a number of respondents in a detour during the transition to adulthood. These individuals were not possessed of an orientation to schooling which would allow them to complete college, but upon leaving college were unable to find employment which supported a fully independent, stable, adult existence. A period of stagnation, often lasting years, commenced in which they occupied a limbo between college and the labor market.
The second theme of this dissertation is the consistent pattern of gender differences in patterns of adult schooling. In Chapter 1, I showed that women disproportionately enroll as adult students, even relative to their over-representation in college generally. This chapter also revealed that women also seem to respond more consistently to downturns in the economy by returning to college more than do males. In Chapter 4, these cross-sectional findings were confirmed; I estimated that net of other characteristics, women were more likely to re-enroll in higher education than males. This was true among those who had initially enrolled in college during “traditional years”, but was particularly pronounced among individuals who had never been in college before turning 25. Chapter 6 contributed a number of additional findings relating to gender differences. First, I found that the income loss incurred upon returning to college was more pronounced among men than among women – the effect was about twice as large. Second, I found that women appear to experience quicker returns to additional years of postsecondary schooling short of a bachelor’s degree. Third, women are substantially more likely than men to complete a degree as adults. This difference in completion was not found to be explained by prior academic performance, familial responsibilities, or labor market experience, but on the contrary was net of these factors, and estimated to be larger after their inclusion in the predictive model. Finally, my results showed that women benefit from completing a degree far more than do men, both in terms of income and access to crucial job benefits.

Taken together, one could postulate that differences in the economic benefits of college education account for the differences in enrollment and completion. That is, perhaps women enroll and complete college at higher rates because they stand to gain more from doing so. This would explain gender differences as rational responses by men and women to the real gendered structure of returns to education. Indeed, DiPrete and Buchman (2006) suggest essentially this causal relationship, thought they use a broader measure of standard of living. And indeed, despite the declining wages of men without a college degree, their incomes remain higher on average than those of similarly-educated
women. Gender-based occupational segregation has declined somewhat, but remains high and is more pronounced among those with less education (Charles & Grusky 2004). For some men with a high school degree, realistic avenues into reasonably high-wage positions in manufacturing, skilled trades, and construction may still exist. Traditionally female-dominated jobs which do not require a college degree tend to be far less rewarding “pink collar” occupations.

This is one of two dominant explanations of the female advantage in college completion; the other postulates the existence of intrinsic female cognitive and behavioral advantages, the effects of which have emerged as sexism lost some of its power (Goldin, Katz & Kuziemko 2006). To interpret the findings summarized above, I want to suggest three more possible explanations. First, it is possible that young men and women, and particularly those from working-class families, draw upon different sources of information when forming their understandings of labor market opportunities. Young men may use the experiences of older males such as their fathers, uncles, and friends’ fathers as guides to in deciding on a desirable and realistic occupational path. Using such sources of information may lead them to decide that college is not necessary. But older males may have utilized occupational ladders which no longer exist, or which have been substantially transformed. Older males may be thought of, then, as dated sources of information. Young women, by contrast, may either have gender-specific role models in occupations where the career ladders now involve a higher degree of credentialing (such as nursing) or may lack suitable gender-specific career role models altogether. The latter is more likely to be the case for women than for men because women in older generations were less likely to have steady, relatively high-earning jobs than men. In this case, females might be more likely to make their plans by drawing information from the culture at large or from what they learn in the school system, both of which recommend college.

Secondly, my findings suggest that the immediate loss of income for males is greater for men when they enroll in college, raising the cost of enrollment both to men themselves and to their families.
This of course, would really only explain differential enrollment among men and women who had already been out of school for a number of years. Thirdly, it is possible that male socialization is less reconcilable with college participation and indeed with education in general, than is that of females. This idea was first introduced, to my knowledge, in Paul Willis’s classic study *Learning to Labor* (1977). Willis noted that working-class notions of masculinity were reflexively anti-intellectual, relying on a sharp distinction between “practical” knowledge (which was valorized) and “book” knowledge (which was denigrated). Intellectual knowledge was, indeed, depreciated as feminine. Willis also noted a positive valuation of physicality as masculine, leading to an embrace of the manual laborer identity. Additionally, males may be encouraged by parents to challenge authority, and rewarded in peer esteem for so doing. Finally, males may be led to disregard schooling because their having been trained to value themselves as breadwinners may lead to early labor market entry and a disinclination to interrupt work for schooling. Among my interviewees, there was some support for this general socialization hypothesis, such as Ramon Salcedo’s reason for feeling that school was “not for him”.

The third story that emerges is one regarding the place of higher education in the transformed life course. It is well-established at this point that over the past number of decades, average ages at which people exit the education system, enter full-time employment, marry, and have children have risen. It is generally believed that the delayed transition from school to the labor market is the key causal force here, as individuals delay marriage and family until they are financially stable. But it has also been noted that the individual component events in the transition to adulthood have become more varied in their occurrence, and that the sequencing of these transitions has become more irregular (Buchman 1989; Shanahan 2000). Chapter 3 suggested that only individuals who finish college rapidly tend to delay full-time work, marriage and childbearing until completing a degree. Moreover, such “rapid completers” have relatively uniform transitions to work, marriage, and parenthood. Individuals who take non-standard paths through higher education tend to have transitions to adulthood which
more resemble those who never enroll in high school: they enter full-time employment, marry, and have children at younger ages and generally before completing a degree. Further, among those taking non-standard paths through college, the transition to adulthood is characterized by substantial diversity in the timing and ordering of events. The direction of causality was impossible to establish in this analysis, and most likely flows in both directions: college affecting work and family transitions, work and family affecting college transitions.

Interesting evidence also emerged from interviews regarding this matter. A few of my respondents, both male and female, departed school because of an impending birth. But this was not a major theme. What was more common, among both genders, was having a child during a break in enrollment which occurred for other reasons. This onset of parenting in turn pushed back plans for returning to school. Some respondents moved back in with their parents or with other family members in order to have additional help with childcare while they pursued schooling. But for others, the arrival of a child served as an impetus to go back to school, as they felt a newfound need to complete college in order to be a role model to their child.

**Policy Implications**

When it comes to adult students, there are two key policy matters commonly discussed. In the first, whether making re-enrollment in college possible for adult students is a worthy use of public funds is questioned. In the second, policymakers hold out college enrollment as the primary answer for adults who have suffered economic misfortune.

In discussions of the first matter, a traditional bias can be discerned which sees older individuals as less trainable, less able to learn, and thus less able to benefit from college education than younger people (Quinnan 1997; Kasworm 1990). Older individuals are suspected to be less able to benefit from college because of cognitive deficiencies, or because competing responsibilities leave them without the
requisite intellectual energy to focus on school (Sissel, Hansman, & Kasworm, 2001). Thus, from an economic perspective, adults are seen as a poor public investment, given their lower rate of monetary return on a college degree (Becker 1964).

Prior research has already debunked the notion that adults are cognitively impaired relative to younger students (Richardson 1994). In fact, research comparing adult and traditionally-aged students tends to be quite favorable to the former. They tend to have better time management skills (Trueman & Hartely 1996), and to be more motivated by a desire to learn the subject matter itself (Wolfgang & Dowling 1981; Knowles 1990). When high school grades and part-time status are controlled, older undergraduates are at least no less likely to complete a degree, and may in fact be more likely to complete (Jacobs & King 2002; Crosta, Bailey & Denkins 2007; for a dissenting finding, see Taniguchi & Kaufman 2005). There is some research that suggests that adults tend to earn a smaller wage premium upon completing a degree (Taniguchi 2005; Monks 1997), but this is not universally found (Ferrer & Menendez 2009) and estimates in such studies may be biased upwards, as I argued in Chapter 6.

My findings in this dissertation suggest, further, that adults do benefit from college attendance. I showed, in Chapter 6, that roughly 40% of those who enroll in college as adults complete a degree, and that completing a degree is associated, on average, with a 20% increase in annual wages as well as with greater access to job benefits such as health insurance, sick leave, and paid vacation. Moreover, for most groups, there appeared to be economic benefits for simply attending college without completing a bachelor’s degree.

Additionally, in interviews adult students repeatedly cited substantial non-material benefits of both attending and completing college (the latter were largely anticipated). Respondents frequently professed joy and excitement deriving from the learning process itself. For example, one respondent described his experience in community college as follows:
I have learned so much in this school. I have learned about myself. I’d like to say I’ve completely changed... This school has taught me about diversity in ways that I never dreamed. I’ve learned so much about people. I’ve learned so much about history. I have enjoyed myself more than I could have ever imagined.

College, for most respondents, was certainly a path to a better job and more money, but this was far from all it was. Beyond genuine engagement in the subject matter, respondents described going to college as an experience that transformed them for the better, led them to grow intellectually and morally. Indeed, respondents frequently expressed, in their comments, beliefs consistent with the traditional values of a liberal arts education, and particularly stressed the value they got from humanities, social science, and science courses in terms of helping them to better understand the world in which they live. Moreover, going to college, for many respondents, represented a substantial accomplishment in itself, and completing was anticipated to be an even greater accomplishment. This was particularly true, for many respondents, given prior experiences of failure and frustration – completing college this time would redeem their prior struggles and sacrifices.

In the eyes of most respondents, the value of college was considerable but not quantifiable. And indeed, we ought to resist any discussion of higher education policy that reduces the value of college attendance to dollars-and-cents terms. This is not to say that economic considerations are not important; of course they are. But in considering policies relating to college access, economic efficiency ought to be but one consideration among many. As David Labaree has noted, when policy perspectives in education stress goals of social efficiency and of individual economic gain, we tend to short-change learning itself (Labaree 1997). But learning, and personal transformation and change through the learning process, is ultimately the point of any educational enterprise. Against cynical “critical” analyses which reduce college to a means for the wealthy to secure their privileges, and which sharply distinguish
“education” from “school”, we should re-emphasize that the right to education is the right of access to knowledge, to culture, and to tools of critique.

Moreover, second-chance higher education is, at this point, deeply ingrained in our culture. It is simply presumed that one can go back to school if one wishes, and this likely permits educational setbacks to be better tolerated than they would be otherwise. One does not ever fail permanently in American higher education, because there is always another opportunity in the future. This arrangement is, in fact, fundamental to our notions of economic justice and mobility. Many years ago, sociologist Ralph Turner described the American mobility ideology as *contest mobility*. Under contest mobility, allowance is made for “late starters” to compete in the mobility game with the chance to succeed:

In the sporting event, there is special admiration for the slow starter who makes a dramatic finish, and many of the rules are designed to insure that the race should not be declared over until it has run the full course. Contest mobility incorporates this disapproval of premature judgments and of anything that gives special advantages to those who are ahead at any point in the race (Turner 1960: 858)

This becomes an integral part of the system of social control, says Turner, both because it permits the currently unfortunate to retain the hope of eventually improving their situation, and because it leads those who are not successful to place the responsibility for their own situation squarely and often solely on themselves. While Turner is right to point out that this arrangement promotes a failure to recognize the reality of differential opportunity (on this point, see also Karabel 1972), we should not underestimate the reality of opportunity itself. For some individuals, second-chance higher education may be a false beacon of hope that hoodwinks them into believing that the system is fair, but for others it becomes a means of genuinely improving their lives.
If the first policy discussion questions the very worth of permitting adults to return to school at all, the second presumes that adult access is extremely important, and often seems to suggest that it alone can compensate for the present and worsening difficulties of those at the lower end of the economic spectrum. It is quite standard to suggest that the solution to rising inequality is to increase the educational attainment of the population, and it is equally commonplace to propose individual educational upgrading as a response to job loss or chronic economic difficulty. Indeed, this study suggests that adults do make use of school as a means of escaping from a poor labor market. But the question is not whether access to education can help economically frustrated adults, but whether it is sufficient. Is the solution to the declining fortunes of blue-collar laborers really just that they need to go to college?

The results in the prior chapters suggest that returning to education permits adults the chance to make genuine gains. But the word *chance* ought to be emphasized. College can help, but the benefits are far too uncertain to rely upon it as the sole or primary policy response to heightened economic insecurity. For instance, Chapter 6 revealed that while college completion is certainly possible among adults, the majority who return do not actually complete a degree. This is true of every subgroup I investigated, including those in the top quintile of measured cognitive ability. I also found considerable differences in the size of educational returns. I found, for example, that Latinos do not appear to gain in wages from enrollment short of a degree, and that men do not gain economically from completing a degree as adults after work experience, job tenure and other matters are controlled.

Therefore, while I endorse adult educational access as one tool to provide displaced and struggling workers with stability and opportunity, college access is not a panacea for socioeconomic troubles and inequities and ought not to be thought of as such. Permitting, encouraging, and even financing college attendance for adults without bachelor’s degrees cannot and will not by itself result in true economic security for those in the bottom half of the economic distribution. Unionization,
economic redistribution through progressive taxation, a reasonable minimum wage, and a robust social safety net are far better tools to fight poverty, insecurity, and inequality. Providing college access to all who wish to attend, and making attendance at a quality institution affordable are worthy policy goals, and we must make every effort to realize them. But the educational system cannot, and should be expected, to compensate by itself for the inequality and precariousness generated by the market. College-for-all is not a progressive agenda in and of itself; it becomes such only as part of a much broader set of reforms that will provide genuine economic security and opportunity to all regardless of race, gender, or socioeconomic origins.
Appendix 1: Qualitative Methods and Procedures

Data for Chapters 2 and 4 came from a series of in-depth interviews conducted with a sample of 36 adult undergraduates. The procedures I will describe below were approved by the Institutional Review Board of the CUNY Graduate Center. I was the Principal Investigator on this project, but as I was a graduate student, I was required to have co-signatory on all of my documentation. That co-signatory was my dissertation chair, Dr. Paul Attewell.

All subjects for this portion of the research were recruited from a single public university system, but from nine separate campuses of that system. Each of the campuses has a separate demographic and academic profile, as they serve somewhat different populations. By gathering subjects from multiple campuses, I was able to achieve more diversity that I was likely to have had otherwise. I initially chose campuses for recruitment based on a combination of convenience and the colleges’ importance within the system. At later stages in recruitment I specifically targeted certain race-gender groups for recruitment. In particular, in early recruitment I had not recruited enough white males or black males, and so I chose recruitment sites at which white and black students were over-represented. Therefore, in the end, the respondents were selected mostly through convenience sampling, but in a semi-purposive manner.

There were three criteria for eligibility:

1) Age – subjects had to be at least 25 years old

2) Degree sought – one’s eventual goal had to be a bachelor’s or higher, but I accepted individuals who planned to earn in en route associate degree.

3) Enrollment status – individuals had to be enrolled at the time of interview as an undergraduate in a higher educational institution. This final criterion was relaxed in four cases, for
individuals who had recently earned a bachelor’s degree while older than 25; the distinction seemed rather immaterial for recent graduates.

Subjects were solicited in two principal ways: either by being approached in person in front of their campus, or through an in-class announcement. I conducted all in-person recruitment, and I recruited in this manner at five separate campuses during the fall and spring semesters of the 2013-14 academic year. I targeted potential participants on the basis largely of physical appearance – of looking ‘slightly older’. But I was quite liberal about this, as I wanted to make sure to recruit respondents from the lower end of the eligible age range, and I realize that frequently individuals appear to be younger than they are. I always carried a clipboard with a set of recruitment flyers and a sign-up sheet. Though I initially experimented with various ways of approaching people, I quickly developed a rather standardized script, which I can approximate as follows:

*R: Excuse me. Are you a student at this college?*

[if yes, continue; otherwise, apologize for stopping them.]

*R: I am a graduate student who is studying undergraduates. Can I ask you two quick questions? First, are you at least 25 years old? Second, are you going to school to earn a bachelor’s degree?*

[If yes to both, continue. If not, thank them for their time and disengage.]

*R: That is great! I am actually researching “adult undergraduates” – people who are 25 or older and going back to school to earn their BA [simultaneously show recruitment flyer73]. I am interested in what has brought you back to school, what your experience is like while you are here, and what you hope to get out of it. I would love a chance to interview you – not now, but at a time and place that is*

73 Attached below
convenient for you. The interview would take about an hour, and I pay $20 for the interview. Are you interested in participating?

At this point the person I approached and I would enter into an exchange. At the end of the exchange, I asked them to write down, on the sign-up sheet, their name, the school they attended, and their email address, and I would give them a copy of the recruitment flyer. If they opted not to participate at this point, I would usually give them a flyer anyway (in case they changed their mind, which no one ever did), and asked them to let any friends or acquaintances who might be interested know about the study (this did not yield any recruits either).

After each day of recruiting, I would email everyone who had signed up, thank them for their interest, re-describe the project, and ask them where and when would be best for them to be interviewed. At one of the campuses I had access to an office, so for recruits from this college I would mention this location (and all but one recruit from this campus elected to be interviewed in that office). Otherwise, I would re-emphasize that I wanted the interview to be as comfortable and convenient as possible for them. I attached three documents to these emails: a set of likely interview questions, the questionnaire, and the informed consent form. The interview questions were described as a “rough guide” to the sorts of questions I would ask, but not a word-for-word script. I followed up three to five days later with another (virtually identical) email if I received no response. About a week after that, I would send a final follow-up email to non-responders in which I assured them that if they did not respond to this email I would interpret it as definitive evidence that they did not wish to participate and would not contact them again.

Over the course of these recruitment efforts, I approached a large number of people – I made no effort to note the total number, but I estimate that no more than one in ten people stopped when I

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74 The set of likely questions and the questionnaire are attached below.
engaged them, was eligible, and signed up to participate. In all, sixty-four individuals signed up to participate. Of this sixty-four, fifteen individuals actually ended up being interviewed. The majority of the remainder simply did not respond to my emails. A smaller number responded, but did so in order to decline participation, or did not show up to arranged interviews.

Most of the rest of my participants were recruited through in-class recruitment announcements. In some cases I made the announcement myself, either in my own class or in a class being taught by a colleague. In other cases the announcement was made by another instructor who offered to do so. Twenty respondents were recruited in this manner. Finally, one respondent was referred by another participant.

In no cases was I currently the instructor for any participant at the time of the interview. I recruited in one class I taught on the last day of class before the final exam, asking individuals to indicate provide their emails on a sign-up sheet if they were interested. But I did not contact these individuals until many months later, well after grades had been submitted, and by this time I was no longer teaching at this campus. In all, seventeen students indicated interest (not all of whom were eligible). A total of six were eventually interviewed. The other fourteen respondents recruited in-class were recruited by no less than six separate colleagues who volunteered to make in-class announcements describing my project and to hand out flyers.

I met respondents in various locations, most of which they proposed. I met most respondents on the campus of the college they were attending. As I mentioned above, I had an office at one of these campuses, and carried out a number of interviews there. Campus cafeterias or coffee shops were the sites for a number of interviews. I also met respondents at their places of work, and at cafes, restaurants, and donut shops. Whenever possible I offered to buy the respondents a beverage prior to beginning their interview. When I met respondents on a campus, I arranged to meet them in front of
that campus. By that time, we had exchanged phone numbers, and could remind them of my appearance (or inform them, in the case of respondents recruited by colleagues).

Prior to the interview’s beginning, I presented respondents again with the informed consent agreement and asked that they take time to read it through. I specifically indicated the section regarding the procedures I would go through to guarantee their anonymity. I also specifically indicated the section which required them to separately agree to be recorded, and explained my rationale for recording the interview (which was, in short, ensuring that responses were recorded accurately). All subjects who came to the interview signed the form at this stage and agreed to be recorded. In the first few interviews, I scanned and emailed the signed informed consent form to respondents after the interview. After the first few, I brought two copies to each interview – one for them and one for my records – both of which both they and I signed.

At this point, I explained the format of the interview, which was a “semi-structured life history interview”. I told respondents that the interview would focus on their experiences with higher education, but since educational decisions do not occur in a vacuum, I would be asking questions about other topics that were relevant to their educational decisions. I also emphasized that the interview questions that I would ask would inevitably differ from the list they had been sent, but would cover roughly the same subjects.

Subjects completed the questionnaire, and afterwards the interview began, recorded using a small digital recording device placed on a table or chair between us. The interviews were “semi-structured life-history interviews”, though typically the time period covered intensively began not with birth but with high school experiences. I opted for a semi-structured format in order to strike a balance between free-form and scripted interviews. I wanted the interviews to be relatively standardized, at least in terms of the topics and their ordering, but I also wanted the freedom to ask follow-up and
clarifying questions as well as to pursue unexpected topics of interest if they arose. In the first few
interviews, I kept the list of questions as a reference. As interviews progressed, their form became both
more standardized (especially the order in which I brought up topics, the way in which particular
questions were phrased, etc.) and more free-ranging (in that I felt more comfortable to pursue topics of
interest as they arose). In all honesty, early interviews were the most unique, and the topics discussed
changed quickly at first but then settled into a pattern as my precise research questions became clarified
in the course of interviewing.

The interviews tended first to cover family background and educational attitudes, then high
school experiences, and then the lead-up to transitioning out of high school. Next, I covered the time
period between leaving high school and the present enrollment spell; this section varied drastically
among respondents according to their individual life trajectories. The present enrollment stint was then
focused on – reasons for enrollment, plan for the future, experiences in college. Finally, there were
some more general questions. First, I asked respondents whether there was anything about being older
in college that made it harder, and whether there were things about being older that made it easier.
Second, I asked respondents to comment on societal perceptions of educational identities – whether
people without a degree were looked at differently than people with a degree, and if so in what ways.
This section permitted me to explore respondents’ perceptions of the social meanings of education, the
extent of stigmatization of those without a college degree, the meaning of education to them
personally, the meaning of a degree to them personally.

Interviews took slightly more than an hour on average, and I typically set an alarm to let me
know when an hour had been approached. I did not end the interviews at this point, but would ask
respondents if they agreed to answer a few more questions; they all did so. After the interview,
respondents were paid $20 as promised and signed a form which stated that they had been paid. A few
subjects refused payment; I asked them to indicate this on the form and initial it. I sent subjects a follow-up email the next day thanking them again for their participation.

After all interviews were completed, I contracted with a professional transcription service, Quickscribe Ghana, to transcribe interviews. Transcription was paid for in large part by a dissertation research grant from the CUNY Graduate center. The audio recordings – which totaled more than 37 hours - were sent via a secure file transfer service in July 2014. All audio recordings were labeled with pseudonyms prior to being transferred. The first half of the interviews was transcribed and emailed back to me in late August 2014. The second batch took considerably longer, and was sent to me gradually over the next four months. I received the final transcriptions in late December 2014. Transcripts totaled roughly 800 pages.

As they were sent back to me, I listened to the recordings and edited the transcripts. As the transcription service was Ghanaian, idioms and particular phrasings of American English tended to be mistranslated. Additionally, many of my respondents had fairly thick accents, and some of the recordings had quite a bit of background noise. While the transcriptions were in general of good quality, they did require extensive editing. I also needed to add punctuation, indications of laughter, and other markings to elucidate the respondents’ meanings in the transcripts.

I then began reading through and coding the transcripts. I had a set of initial codes, but these were altered – expanded, revised, and collapsed – as I continued reading through the set of transcripts. My final set of major codes was as follows:

A. Initial Orientation – text relating to family background, high school preparation, and other matters that described the respondent’s orientation to during childhood and adolescence. The focal time period here was the last couple of years in high school.
B. Where to go – factors relating to how the respondent chose the college they initially enrolled in, and in each subsequent enrollment spell.

C. Reasons for leaving – for each withdrawal from school, text in which the respondent described the broader context of their leaving and/or their conscious reasons for doing so.

D. Leaving for good? – for each withdrawal, text that describes whether the respondent felt that they were dropping out or stopping out (I asked explicit questions regarding this matter).

E. Reasons for return – for each enrollment that was not immediately after high school, text that refers to reasons and context for the decision to re-enroll.

F. Education’s Value – text throughout interviews in which the respondent indicates personal views of the meaning of value of education, or text in which they note how people with different levels of education are perceived.

G. Off-time transitions – text in which the respondents indicated feeling or believing that they were “late” or “off-time” with given transitions or the attainment of different statuses.

H. Success/difficulty as an adult – text in which the respondents described ways in which their age made it easier or more difficult to return to college

I. Younger students and being back – text in which the respondents described their feelings regarding their younger classmates

J. Work-family-school Conflict – text in which the respondents described time constraints, efforts to balance competing demands, or factors which make it easier to do so.

Text which corresponded to any of these codes was copied into a larger document and annotated. This produced a document which was 115 pages long. At this point, I decided upon the two
chapters I would write using this data – one that focused on reasons and context for delay and drop-out, and another that focused on reasons for enrolling in college as an adult. Of the large codes I had already indicated as important, these topics made the most sense in the context of the larger dissertation as they approached the most general questions. I then coded selected text into sub-codes which related to motivations for the two decisions. The topics covered in the chapters emerged from this process.

In selecting the chapter subsections and framing the argument, I was influenced by the general inductive orientation of grounded theory (Glazer & Strauss 1967), but I do not claim to have followed grounded theory’s methods in any way that its practitioners would recognize. In general this is because I do not believe that it is possible to begin data collection or analysis without hypotheses. So I always began with something – I began interviewing with a set of topics and questions, and I began coding with a set of categories. What I took from the grounded theory approach was flexibility towards these hypotheses, research questions, codes and categories, permitting them to change progressively as I gathered data and as research questions began to make more or less sense.

I am reasonably satisfied with this data collection. I have been told that in interviewing, one can consider data collection complete when is hearing “repeats” (Margaret Chin, personal communication) – when new respondents are no longer giving replies which differ substantially from what previous respondents have been said. This is a sort of qualitative “saturation” point. With regard to some questions, I felt that I had certainly reached saturation. But with regards to life-history narratives, reasons for delay and stop-out, reasons for enrollment, I was nowhere near saturation. I am not even sure when or if this might occur. The fact is that people’s young adult lives are amazingly varied, and perhaps nowhere is this more the case than with non-traditional students, people who are not following really any standard script (or are at least not following it faithfully). I could probably have collected a hundred more interviews and still have been hearing new patterns of enrollment and new constellations of reasons for enrollment decisions. Perhaps, with more time and funding, those interviews will occur.
Recruitment Flyer

Adult Students in Higher Education: Histories, Goals and Challenges

Seeking volunteers to be interviewed for a research study

Time commitment: 45 min-1hr
Compensation: $20
Eligible: Bachelor’s Degree seeking undergraduates who are at least 25 years old

I am a graduate student in Sociology at the Graduate Center of the City University of New York, and am conducting dissertation research on ‘adult undergraduates’ – individuals who are at least 25 years of age, enrolled in college, and seeking their bachelor’s degree. If this describes you, I would like to invite you to participate in this study.

Why research adult undergrads? The simple fact is that ‘non-traditionally aged’ students make up an important and growing part of the college-going population, but not much is known about them. Also, college practices and financial aid policy tend to be oriented towards ‘traditional’ students – those directly out of high school who can concentrate fully on schooling—and often do not serve non-traditional students very well. I am hoping that my research can contribute to changing this.

I would like to interview you about your educational history, your reasons for going to college, and your present experiences as a student. The interview will take between 45-60 minutes. Since I know that you are busy, I will work around your schedule – the interview will take place at a time and place convenient for you. I will compensate you $20 for your time.

To protect your privacy, you will be completely anonymous in any published research – that means neither your name nor anything about you (neighborhood, college, etc.) will be mentioned by name. I will send you the interview questions ahead of time for you to review.

If you are interested in participating, please email dmonaghan@gc.cuny.edu and write ‘Research Participation’ in the subject line. Thank you for your time!

About the researcher: David Monaghan is a 5th year PhD student in Sociology at the Graduate Center, CUNY. His research is in the area of inequality in higher education.

This research has been approved by the Institutional Review Board of The Graduate Center, CUNY.
Planned Interview Questions (Emailed to Respondents)

1) I am interested in your family background. What sort of an education did your parents have? What did they do for a living? Do you remember your family struggling economically when you were a kid?

2) I am interested in getting an idea about what your education has been like up to this point. Did you plan on going to college when you were a high school student?

3) What was high school like for you? Did you like school? What sort of grades did you get?

4) Did your peers respect the teachers in school, or did teachers have a hard time controlling their classes?

5) Were you encouraged to go to college by your parents? Your teachers? Others at your school?

6) Did most of your high school friends go on to college?

7) When did you first enroll in some kind of college?

8) (If answer to 6 is not ‘directly after high school): What did you do instead? And did you plan to go to college later?

9) Is your current spell in college your first time in higher ed? When did you go to college in the past?

10) (If answer to 8 is ‘no’): What was the outcome the other times you were in college? What led to your leaving?

11) When you were at college in the past, did you live on campus ever? Did you have a job? How many hours a week did you work?

12) What sorts of jobs have you had up to this point? And what sort of job do you think you ultimately want to have?

13) What led you to return to school this time?

14) How are you paying for school?

15) Are you working right now?

16) (If answer to 16 is ‘yes’) Does your job ever get in the way of what you have to do for school?

17) Do you have children or someone else you are responsible for looking after?

18) Do your caretaking responsibilities ever make it hard for you to focus on college?

19) Do you get any help from anyone with childcare?

20) How does your family feel about your going back to school? What have they done to let you know how they feel?

21) Have you been able to take any steps to make it easier for you to finish school this time?

22) Does the school do anything to make it easier for students with busy lives like yourself? Is there anything they could do?

23) What does a college education mean to you? What does it mean to be a person with a college degree? What do you expect to get out of going to college?
Questionnaire

Name:_______________________________________

a. Age:______

b. What gender do you identify with?

○ Male ○ Female

c. Which racial/ethnic group do you consider yourself a part of?

○ Black/African-American
○ Caucasian/White
○ Latino/Hispanic
○ Asian/Pacific Islander
○ Native American
○ Multiracial/Multiethnic
○ Other (Please specify):______________________________

d. Marital Status:

○ Never Married
○ Married
○ Single
○ Divorced
○ Separated
○ Widowed

e. How many children do you have? ________

f. Who lives in your household with you? (Indicate all that apply)

○ Spouse
○ Partner
○ Own child/children
○ Father
○ Mother
○ Grandparent
○ Other family (specify):______________________________
○ Friend/roommate
○ I live by myself

g. Are you employed at present? Y N (if N, skip to question k.)
h. How many jobs do you presently hold? _______

i. In an average week, how many hours do you work? _______

j. What is your job title? ___________________________

k. What forms, if any, of student financial aid are your presently receiving?
   - Pell Grant
   - TAP
   - Work-Study
   - other need-based aid
   - Merit-based aid
   - Stafford Loan (subsidized)
   - Stafford Loan (unsubsidized)
   - Other federal or state loan
   - Private loan
   - I am receiving no financial aid at present

l. What college are you attending at present?: _____________________________

m. Which colleges have you attended in the past? (Skip if none)
   i. _____________________________________________
   ii. _____________________________________________
   iii. _____________________________________________
   iv. _____________________________________________

n. What are you currently planning on majoring in? _____________________________

o. How many credits do you need to complete your degree? ________________

p. What is your reason for pursuing a Bachelor's degree (check all that apply)
   - Get a better/higher paying job
   - Interest in learning
   - Pride/accomplishment from completing degree
   - Not sure
   - Other (State): ______________________________________

q. Check all of the statements you agree with:
   - It is hard to get a decent job without a college degree these days
   - I have struggled making ends meet in the past few years
   - The job I want to have requires a bachelor's degree
My family supports my decision to go back to school
My family gives me help that makes it easier for me to finish school
Completing my education is my top priority now
My job makes it difficult to focus on my education
My family responsibilities make it hard for me to focus on school
My college offers services that make it easier for me to balance work, family, and school
College is harder for someone my age than for a younger student
College faculty prefer to teach younger students
I have had to suspend my education for financial reasons in the past
I have had to suspend my education because I was struggling academically in the past
I expect to earn more money after I finish my degree
I expect to get a different job after I finish my degree
Appendix 2: Quantitative data and procedures

The Choice of Data

Analyses in Chapters 3, 4, and 6 drew on the National Longitudinal Survey of Youth, 1979 cohort (NLSY79). For the study of adult college-going, the NLSY79 is not merely the best dataset; it is, in the last analysis, the only dataset that has the necessary characteristics. For to study this topic, one needs longitudinal data covering at the very least 20 or 25 years of subjects’ lives, from high school through to age 40.

Most educational longitudinal studies simply do not measure up in this regard. Consider the Beginning Postsecondary Students Longitudinal Surveys (BPS), several iterations of which have been carried out (1990/94, 1996/2001, 2004/09, 2012/17). These studies select a random sample of first-time freshmen enrolling in a given year and follow them for a number of years. This will not do for two reasons. First, the adults who end up in this survey will be first-time enrollees, and as I established earlier, two-thirds of adult undergraduates are returning students, not first-timers. Further analyses of both the NLSY79 and NPSAS demonstrate that adult students who enroll for the first time beyond age 24 vary substantially from those who first enroll in traditional ages – they are from more disadvantaged backgrounds and have weaker academic preparation on average. Thus, the adults who appear in the BPS will not be representative of most adult undergraduates. Finally, BPS surveys only follow respondents for six years at best, and this is far from enough time to truly understand the processes of prolonged schooling.

The NCES has also carried out a number of longitudinal surveys which follow respondents from some stage of K-12 schooling through college and into adulthood: the National Longitudinal Survey of
the High School Class of 1972, The High School and Beyond Survey, and the National Educational Longitudinal Survey of 1988, The Educational Longitudinal Survey of 2002, and the High School Longitudinal Study of 2009, to date. These surveys, unfortunately, focus on the early transition to adulthood only, and stop following respondents when they reach their mid-20s or early 30s. The NLS-72 is the longest of these surveys, following a representative sample of a cohort of high school graduates for fourteen years. But even this survey only sees respondents to about age 32. The HS&B followed high school seniors and sophomores for twelve years, getting the oldest to about age 30. The NELS-88 was a representative sample of eight graders in 1988 that was followed up for the last time in 2000, only eight years out of high school.

There are only three surveys which are of long enough duration to make them useful for studying adult college-going: the Panel Study of Income Dynamics, and the two iterations of the National Longitudinal Survey of Youth (1979 and 1997). The PSID is less than optimal for two reasons. First, since it began with a representative sample of 18,000 in 1968, initial respondents were drawn from across the age range. As a result, most of the respondents were already adults at the beginning of the survey, and may be lacking substantial enrollment data from earlier in life. The effective sample power of the PSID for my purposes would be rather small and scattered across a large number of birth cohorts. Second, the PSID, it turns out, asks questions regarding educational attainment during every wave, but not about enrollment per se. Since the full complexity of adult enrollment patterns is what I am interested in capturing, this is insufficient. Imputing enrollment based on changes in educational attainment will miss all enrollment spells which do not result in a degree – which, we know, is most enrollment spells.

The NLSY97, though more timely, simply hasn’t progressed far enough along yet. The oldest respondents in the NLSY97 were born in 1980, making them 32 in the most recent year for which data has been processed. The NLSY79 is, therefore only survey that is up to the task. Its chief drawback is that the respondents are a bit removed from the “action years” of adult enrollment – their late 20s and
30s. NLSY79 respondents experienced these ages between the mid-1980s and the mid-2000s (the youngest respondent turned 40 in 2004). Thus the NLSY79 does not tell us much of anything about today’s adult undergraduates. But this is the intrinsic difficulty of empirical life-course research. In order to do any work, we need to wait until a cohort has experienced the full range of relevant years. We are therefore always left studying what just happened, rather than what is happening today. The longer a process takes to unfold, the more dated the data will intrinsically be. The cohorts presently doing the bulk of adult enrollment is precisely those being followed by the NLSY97. Unfortunately, we will have to wait for them to age another ten years at the very least in order to use this data to study more recent patterns.

My strategy was to use the NLSY79 for all analyses in which I needed longitudinal data over a long time period, but to begin with some more up-to-date reporting on adult undergraduates using cross-sectional surveys in Chapter 1 – the NPSAS:12, the CPS October Supplement, and the American Community Survey.

The National Longitudinal Survey of Youth-1979

The NLSY79 is a longitudinal survey directed and principally funded by the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor. It is conducted, under contract, by the Center for Human Resource Research at Ohio State University and the National Opinion Research Center at the University of Chicago. The survey is based on a nationally representative sample of individuals who were born between 1957 and 1964 and living in the United States in 1978. It is therefore not, in fact, representative of the American birth cohorts of 1957-1964, for it includes individuals who were born in the correct years but immigrated to the US after birth, and it excludes cohort members who either died or emigrated. One can think of it as something close to a birth cohort study, and indeed this is typically
how it is used, but this is somewhat inaccurate. Since the survey began in 1979, respondents were between 14 and 21 years of age at first interview.

An initial sample of 12,686 was drawn using a multistage probability sampling design. This sample consisted of a cross-sectional sample of 6,111 and two over-samples: a sample of 5,295 black, Latino, and economically disadvantaged white respondents, and a sample of 1,280 military enlistees. The initial sample was drawn in 1978 and the first round of interviewing took place over the course of 1979. The sample contracted twice due to funding constraints. In 1984, the military oversample was dropped; only 201 members of this sample were randomly chosen for continued inclusion. And in 1990, the economically disadvantaged white oversample was discontinued as well. The loss of the military sample caused the sample size to drop by 1,079 and the loss of the economically disadvantaged white sample resulted in a further loss of 1,643.

Those considerations notwithstanding, retention in this now thirty-year old survey is impressive. Throughout the 1980s, retention rates were in the 90s, and they were in the 80s through the 1990s. In the most recent year for which data was processed (2010), the response rate was 75.9%. Taking deaths into account pushes this rate above 80%. Moreover, attrition is overstated by this figure, because respondents who drop out can re-enter at a later date. Over half of all respondents had, by 2012, completed all 25 rounds of data collection, and over 80% had completed at least 20 of these rounds. The BLS provides weights for each round of data designed to adjust for non-response.

Data was collected on a yearly basis from 1979 until 1994. Since 1994, respondents were re-interviewed every two years. For the most part, interviews were conducted in-person until about 2002, and phone interviews were used as supplemental. Since 2002, the majority of interviews have been by telephone. Responses were recorded using paper-and-pencil methods until 1990. Between 1990 and 1992, a switch to computer-assisted interviewing occurred, and this has been universal since 1993.
Each year, a standard battery of questions is asked regarding things such as labor market participation, attitudes and expectations, marriage and fertility, education, household composition, and income. In addition to gradual changes to the core questions, supplemental question sets have been added in different years. Data on school characteristics was gathered from the administrators of respondents’ high schools in 1980, and high school transcript data was gathered and coded over the course of the early 1980s. Finally, in 1980, the Armed Services Vocational Aptitude Battery (ASVAB) was administered to respondents; 94% of respondents completed this test. Sections of the ASVAB were utilized to construct the Armed Services Qualifying Test (AFQT), a “general measure of trainability”.

The main body of the NLSY79 is publically available and accessible online. One must apply for a password online, but this process is simple and straightforward, and takes less than a day to clear. After having registered, one can select variables of interest from an online interface and download zip files in SPSS, Stata, and SAS formats. Additionally, there is restricted data on respondents’ addresses and schools attended; access to this data is granted only after a rigorous screening process carried out by representatives of the BLS. I applied for and received access to this data, but did not make use of it for any of the analyses in this dissertation. The NLSY79 also makes available user’s guides and the full text of the each year’s survey. Working with these documents is absolutely essential to researchers attempting to use this data, as the data is for the most part fairly raw. That is, variables which are available tend to be responses to questions, not composites variables formed through synthesizing multiple question responses. Complex skip-patterns thus characterize this data, and must be understood by the researcher in order to answer questions of interest.

**Data Preparation and Variable Construction**

*Time-Varying Measures*
The first challenge with this date involved identifying enrollment spells. Doing so required tapping a number of questions asked in each year regarding the date of most recent college attendance beginning, the date last enrolled in one’s most recent college, and one’s level of educational attainment. There were a number of challenges to resolve due to the structure of the NLSY79 data.

The first matter is that of interview skipping; this is a difficulty encountered for many questions, but it was particularly involved with regards to enrollment timing. The issue is that if the respondent is not interviewed in a given year, they will not be asked educational enrollment questions in that year. When they re-enter the survey in a later wave, information regarding such matters as educational enrollment, and degree attainment will be covered in a retrospective question. So to gather information regarding educational attainment in, say, 1984, one must tap educational attainment and timing questions from 1984 and all subsequent years to capture respondents who skipped one, two, or many waves of interviews.

The second matter is that of screening questions. Respondents were typically asked a screening question first – such as “have you attended any school since the last interview”. If the question was answered in the negative, the follow-up questions such as highest grade attended by that year, the date of most recent school attendance, etc., were not asked. For these questions the response would be coded as a “legitimate skip”. To determine highest grade attended in one would need to look at earlier years for legitimate skips. Therefore, determining the level of educational attainment in a given year required drawing in data from previous years for legitimate skips, and from subsequent years for invalid skips and missed interviews.

Thirdly, in early years only the date for the most recent school attendance was inquired into. Starting in 1994, first, second, third, and fourth most recent enrollment spells were inquired into.
Initially this was asked of more or less everybody, to permit retrospective capturing enrollments missed in prior rounds.

I used questions pertaining to enrollment beginning and ending dates to identify all enrollment starts and stops indicated by respondents and sorted beginnings and endings separately within respondents. Thus for each respondent a vector of beginning dates, and one of ending dates, was created. Redundant dates were eliminated, and the data was then cleaned to align enrollments and departures (i.e. a departure for every enrollment, unless the enrollment was very recent). Years that fell between a new enrollment and subsequent departure were coded to indicate that the subject remained enrolled.

The timing of bachelor’s attainment was somewhat more complicated. The NLSY79 designers had a clear prejudice towards measuring education through years completed rather than through degree attainment. Questions about degree timing were asked in 1979 and 1980, but then were not asked again until 1988. In the meantime, whether a degree was earned since the last interview was asked in 1981-84, but precise timing was not inquired into (which is problematic for individuals who skipped an interview in this period). From 1988 on, the timing of earning one’s highest degree was asked; this permitted back-coding of degree timing through much of the 1980s, but was problematic for those who had not earned a BA by 1980 and had a master’s or higher by 1988. A number of respondents, as a result, claimed to have earned a bachelor’s degree yet lacked information for when this was earned. I made use of two sources of information to resolve this: 1981-84 questions which indicated earning a BA since the previous interview, and college departure timing. Conversely, information on the timing of a BA permitted me to distinguish undergraduate from graduate enrollment. Associate degrees were also highly problematic for these same reasons, which is one reason why I do not focus on them in this study.
For marital events, I drew from yearly questions inquiring into contemporary marital status and questions on the beginning and end of marriages. As with school enrollments, skip patterns and missed interviews necessitate the use of all waves of data to determine when marriages began and ended. The major complication in this regard was that only two marital dissolution dates were ever inquired into, whereas at three marriage commencement dates were possible. Contemporary marital status variables were the only way of determining dissolutions after the second or commencements after the third. Childbirths were similarly determinable; dates of birth for all children were asked in all waves of data, permitting a researcher to establish the number of children and their ages for all years.

The NLSY79 has extensive data on labor force participation. This data was pre-processed by the BLS, producing a huge number of variables which describe respondents’ entire work histories. For each survey year, over 35 separate variables provided dates in which respondents’ jobs ended (one variable per job that might end), and the same number of variables provided information on the reason why that job ended. I created an indicator variable for years in which a job ended involuntarily. Similar data was drawn upon to generate measures of job tenure and work experience in any given year.

For all of the prior time-varying measures – school enrollments, marriages, children, job loss, job tenure, and experience, the NLSY79 supplied enough retrospective questions that statuses could be determined for all years in the survey range and not only for years in which surveys occurred (or in which respondents were interviewed). Thus for the analysis in Chapter 4, I created a person-year file that contains all years from 1979-2010 inclusive. Income and benefits variables were not possible to establish for off-years, or indeed for years in which the respondent was not interviewed. I made use of four yearly income variables – wage/salary income for independent respondents, business or farm income, military income, and wage/salary for dependents – to create a measure for annual income in a given year.
Background Characteristics

Many time-invariant variables were fairly self-explanatory, but I will describe the creation of variables which were more involved. A respondent was coded as being raised by a single parent based off of a variable which asked with whom the respondent lived at age 14. Three AFQT measures were generated for the data which renders the raw score a percentile score for the whole cohort. I chose the 2006 recoding of this variable, which corrects the score for the age at which one took the ASVAB. This produced the smoothest percentile distribution.

Family income was available for individuals still living with their parents, and missing for respondents who were already independent when the survey began. For some cases, I drew on an indicator of poverty status to impute income (all such cases were given an family income of $100 less than the 1979 poverty line for their family size). I calculated a family equivalence scale using a Census Bureau formula (Citro & Michaels 1995) which is equal to \((A + PK)^F\), in which A represents the number of adults in the household, K the number of children, P the proportion of an adult that each child represents, and F the scale economy factor. I followed the Census Bureau’s recommendation in setting both P and F equal to 0.7. I created a relative family scale which divided each family’s family equivalence scale by 2.35 (the value of the equivalence scale for a household with two adults and two children, so that for such a family this scale would equal 1). This relative scale was then multiplied by 17000, which was the median household income for a two-adult, two-child family in 1979 (rounded to the nearest $1000). This resulted in an “adjusted median income” for each respondent. I then divided their actual family income by the adjusted median to produce a measure of the respondent’s family income as a proportion of the national median income, adjusted for household size.

Parental occupation was given in the NLSY79 through 1970 Census occupational classification codes. I recoded these into six categories: professional/technical; manager/administrator; sales, clerical
and service; craftspeople and operatives; laborers; and farmers. I drew on both mother’s and father’s occupation for this measure. The NLSY79 also contains a 1970 Duncan SEI score for the respondent’s current occupation in 1979. I employed this, and further Duncan SEI score data supplied by the NLSY79 website to assign prestige scores to the respondents’ parents’ occupations as well as to the occupation to which the respondent aspires\textsuperscript{75}. I recoded all prestige scores into four categories of SEI scores: 0-25, 26-50, 51-75, and 76-100. Those out of work were assigned to the low prestige category.

A number of measures of school characteristics were available (though for different numbers of students) in the NLSY79 from the survey of school administrators carried out in 1980. I selected three on the basis of 1) their having been measured for a large proportion of respondents and 2) their intercorrelation: percentage black or Latino, the high school dropout rate, and the percentage economically disadvantaged. This scale had a reliability score of $\alpha=.61$ in the full sample.

High school grades were drawn from students’ transcripts. Respondents’ cumulative GPA was not available, and class rank was not recorded for sufficient numbers of respondents. But individual class grades were recorded and standardized. Most respondents had at least twelve grades recorded. I took an average of up to twelve grades to generate a measure of students’ average grades in high school. A student was classed as having dropped out of high school if at any time between 1979 and 1986 they were no longer enrolled in school, their highest grade completed was less than twelfth, and they left school for a reason other than receiving a degree.

There were three more scales that I used as background characteristics: the locus of control scale, the self-esteem scale, and the scale of traditional gender attitudes. The Rotter Internal-External Locus of Control scale was administered to respondents in the survey base year, and the Rosenberg Self-

\textsuperscript{75} These scores are downloadable online at https://www.nlsinfo.org/sites/nlsinfo.org/files/attachments/121217/Attachment%203-1970%20Industry%20and%20Occupational%20Codes.pdf
Esteem Scale was administered in the following year. I used both of these scores as coded by the BLS. The scale of traditional gender attitudes is derived from a series of eight attitudinal questions asked in 1979. Respondents were asked their degree of agreement with statements such as “a woman’s place is in the home, not in the office or shop”, and “employment of wives leads to more juvenile delinquency”. Response categories were Likert-type, and only four categories were presented to force choice and variance. I recoded the variables as five-category, putting “don’t know” answers in the central category, and I reverse coded three items which indicated a positive beliefs regarding female employment. I generated the scale which had the best reliability ($\alpha=.81$) by combining the five items which expressed negative feelings towards female employment and support for the homemaker role.

**Weights**

For the analyses in Chapters 3, 4, and 6 I needed to use a weight variable which was constant within individuals. Survey attrition was, as I mentioned above, modest, but I wanted to make sure that I did not include respondents who dropped out of the survey early on. I decided that I needed respondents to have, at minimum, ten years of data in which they could potentially be an “adult undergraduate”. Therefore, I would drop from analyses any respondent who left the survey prior to turning 35. This had the effect of excluding both initial oversamples which were later dropped, and a number of other cases. Respondents who departed the survey after 35 would be retained for analyses until the year after their last completed survey.

I created a weight variable which adjusts for this particular form of survey attrition. In order to do so, I first generated a dummy variable indicating that the respondent had dropped out of the survey prior to 35. I then performed a logistic regression of this dummy on a large set of background variables. The model was quite accurate, correctly classifying 88.3% of cases, with a sensitivity of 70.7% and a specificity of 95.1%. I generated predicted probabilities from this regression, and multiplied this
predicted probability of dropping out of the sample (mathematically equal to 1 minus the probability of remaining in the sample) by the baseline sampling weight (or, more precisely, the baseline sampling weight turned from a frequency weight into a probability weight). This has the result of up-weighting cases which are more similar to those which later dropped out of the survey and of down-weighting those dissimilar from later survey dropouts.

**Missing Data**

Data was missing for a number of variables. The highest percentage missing responses were the school variables – average grades and school disadvantage. 30% and 36% of respondents were missing values for these variables, respectively, and 15% of respondents were missing responses for family income. Other variables had less than 10% missingness, including AFQT score, traditional gender role attitudes, parental job category, locus of control, self-esteem, disciplinary problems in high school, friend’s college expectations, and own expectation of graduating from college.

Rather than discard all cases with missingness, I elected to impute data. I used Stata’s built-in multiple imputation package, and employed the ‘chained’ option, which leads the program to use multiple implication using chained equations (MICE). I generated five separate datasets, and employed one for most analyses as mi estimate does not work with fixed-effects models or survival analysis.
Bibliography


Autobiographical Statement

David Monaghan was born and raised in suburban Massachusetts in 1978 to parents of (mostly) Irish-American descent. He attended Tufts University in Medford, MA, graduating in 2001 with a degree in both anthropology and history. After spending his twenties in San Francisco, CA, working as a union organizer, bike messenger, mental health counselor, and case manager, he was in 2009 accepted to the graduate program in sociology at the Graduate Center of the City University of New York. He now resides in Madison, WI, and works at a research laboratory which investigates higher education affordability.