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COMMUNITY COLLEGES IN THE LIVES OF CONTEMPORARY YOUTH: EDUCATIONAL EXPANSION, STEADY EXPECTATIONS, AND INTER-INSTITUTIONAL ATTENDANCE

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Abstract

Community colleges have changed notably over the past quarter century, as have the demographics and educational trajectories of the growing proportion of traditional-age college students who attend them at some point along their transition to adulthood. This dissertation extends the literature on how institutional attendance intersects with change and persistence in postsecondary educational expectations after high school in four key ways. First, I identify the key institutional trends at the heart of the current condition of the two-year sector. Understanding the changing macro-structural environment is a necessary first step in revisiting seminal works within the sociology of education, including Burton Clark's "cooling out" thesis (1960), Brint and Karabel's *Diverted Dreams* (1989), and Rosenbaum's critique of the "college-for-all" ethos (2001), all of which predict a downward leveling of ambition vis-à-vis the community college experience, though with varying levels of attention paid to the intersecting roles of institutions, families, and academic backgrounds. Next, I employ graphic, descriptive, and inferential logistic analysis to examine competing explanations about the mechanisms involved in the predicted downward leveling of ambition. How, if at all, do expectations change and what are the mechanisms at play for contemporary youth? Finally, special methodological attention is given to the implications of expanding our longitudinal frame, as well as to accounting for the growing complexity of institutional attendance patterns both within and between the two- and four-year sectors when answering this question. The term "inter-institutional attendance" is introduced to highlight this point. Results provide little support for Clark's cooling out thesis, some support for Brint and Karabel's diversion hypothesis in early adulthood although this disappears depending on how educational expectations are captured in late adulthood and on the comparisons made, and moderate support for Rosenbaum's "college-for-all" thesis, at least for those at the margins

of changing expectations. Instead, I find that the modal experience among contemporary youth is one of holding on to their bachelor's degree expectations, even beyond the normative college-going years. The implications of these findings for existing theory and research, as well as for the national College Completions Agenda are discussed, with special attention given to the development of a new theoretical framework for understanding the role of community colleges in the lives of contemporary youth.

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This dissertation was born over a decade ago during the fateful summer of ’99 when I packed up my belongings in a two-seat Toyota MR2 and took off for our nation’s capital. I had no place to live. I didn’t know a soul in the city. I’m not even sure I knew the difference between a Republican and a Democrat (thank you, Liz Schroeder, for clearing that up). But I knew the internship I was headed for at the U.S. Department of Commerce was the only offer I’d received that came with a paycheck, so I was off. It has been nothing but a winding road since. If you had told my apparel design major self that 14 years later I’d be finishing up a PhD in Sociology, I would have asked you what sociology was exactly. It has been quite a ride!

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Epigraph

"If present trends continue, the community college may well become increasingly isolated from the rest of the system of higher education. Barely functioning transfer programs may break down altogether; already astronomical attrition rates may increase; and private corporations may, through contract training, transform into virtual trade schools what were not long ago comprehensive colleges."

- Steven Brint and Jerome Karabel, Excerpt from *The Diverted Dream*, 1989

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"Community colleges connect the dots – granting two-year degrees, providing new skills training and certification, and providing an affordable path for those who want to move on to a four-year university."

- Jill Biden, Second Lady of the United States, 2012

Chapter 1

Introduction

Persistent growth of the community college student population since the 1960s has made it increasingly difficult to ignore the growing presence of community colleges in the educational landscape. Community college enrollment in the United States grew from about 850,000 in the early 1960s to over 4.5 million by 1980 and roughly 7.5 million by 2011. This growth has persisted despite the decline in the relative size of the traditional college-age population over the late 1970s and into the 1990s. Today community colleges represent close to half (47 percent) of all enrollments in public, degree-granting institutions in the United States (Snyder and Dillow 2012: Table 223). This proportion increases to more than half (52 percent) when limited to undergraduate enrollments in public institutions (Table 240). Two-year institutions also account for 42 percent of traditional-age students (i.e., 18-to-24-year-olds) enrolled in the American public higher education system (Table 226). Further, community colleges serve a disproportionate number of minority students, who are themselves over-represented in lower socioeconomic strata. In 2011, over half (54 percent) of students attending two-year colleges were nonwhite compared to about 34 percent of all four-year students (Table 264). While community college students have come to account for a larger piece of the higher education pie in the past half century, it is important to note that the "pie" itself has gotten larger over the same period of time. Just as the first half of the 20th century marked the diffusion of high school education and the second half of postsecondary education, the 21st century has marked the continued expansion of education at higher and higher levels, including graduate education (Baker in print; Fischer and Hout 2006; Schofer and Meyer 2005).

Despite the continued diffusion of higher education into the 21st century and changes in the attendance patterns of college-age youth, research in the status attainment tradition has remained largely focused on the high school years and person-level considerations (Alexander, Bozick, and Entwisle 2008). However, unlike youth in the earlier part of the century, youth today do not travel in linear, predictable pathways from high school into the world of work or college before getting married and starting families. Instead they are increasingly experiencing a prolonged transition to adulthood, experiencing key milestones in their educational, professional, and family lives in complex and uncertain patterns (Mortimer et al. 2008). Yet, until recently status attainment models failed to recognize the role of persistence and change of postsecondary educational expectations over the life course and larger macro-structural influences on near universal expectations of going to college among youth and their parents today (Bozick et al. 2010). Over 90 percent of high school seniors today expect to attend college and between seven and eight in ten (75 percent) also expect to earn a baccalaureate degree (Ingles and Dalton 2008). Indeed, the majority of Americans have come to believe that education, and increasingly higher education, is *the* route to not only individual success, but a better society as well (Fischer and Hout 2006). Interestingly, this has happened at the same time that education has become one of the primary stratifiers in modern society (Blau and Duncan 1967; Brooks 2000). Put another way, the American public has come to understand and internalize the powerful role that education plays in a host of economic and noneconomic outcomes (Baker in print).

1.1. Why Study Community Colleges in the Lives of Contemporary Youth?

The role of higher education generally, and community colleges more specifically, in stratification represents an understudied area in the sociological literature (Alexander et al. 2008; Goldrick-Rab 2010b). Much of the existing sociological and educational research on community

colleges reflects perennial questions as to whether community colleges represent a democratizing or diversionary force for the students they serve (Dougherty 1992; Goldrick-Rab 2010a). The two quotes highlighted in the epitaph reflect opposing sides of this debate. Burton Clark's "cooling out" thesis (1960), Brint and Karabel's *Diverted Dreams* (1989b), and Rosenbaum's "college-for-all" ethos (Rosenbaum 2001), all of which predict a downward leveling of ambition vis-à-vis the community college experience but with varying levels of attention paid to the intersecting roles of institutions, families, and academic backgrounds, are the most well-developed examples of this. Although Clark himself developed the cooling out label in the functional tradition, much of the work testing it over the 1980s and into the 1990s was completed from a Marxian/conflict perspective.[1] In some cases, these analyses have translated Clark's observations into a radical criticism of the two-year college and in others they trivialized it by inferring a social-psychological duping of at-risk youth attending community colleges (Gumport 2007). In actuality, Clark's central sociological observation was related to the role community colleges play in relieving the inherent tension in democratic societies between a deep commitment to the value of equality of opportunity on one hand and the reality of varying levels of individual abilities on the other (Clark 1960, 1980).

Central to this study is the question of how, and to what extent, postsecondary educational expectations change and persist over the prolonged transition to adulthood and what are the mechanisms at play for contemporary youth? Goldrick-Rab (2010a) notes the problematic tendency of most research on community colleges to fall into one of three main areas of influence (the macro-level opportunity structure, institutional practices, or the individual social, economic, and academic attributes students bring to college) and recommends research

[1] It is interesting to note that the term "cooling out" was actually first used from a symbolic interactionalist perspective in a different research domain, namely Erving Goffman's 1952 *Psychiatry* article "On Cooling Out the Mark: Some Aspects of Adaptation to Failure."

addressing more than one level at a time. This study addresses this deficiency by re-examining these central questions from both the macro-structural and individual levels. At the macro-level, community colleges as an institution have experienced notable changes since the 1960s and late-1980s/early-1990s when the last two waves of comprehensive sociological studies of community colleges were completed. These changes stem from wider sociocultural environments, while simultaneously impacting the nature and meaning attached to community college attendance for individual actors. On one hand, the weight of empirical evidence from studies completed in the 1980s and 1990s shows that otherwise similar baccalaureate aspirants are 11 to 19 percent less likely to receive a bachelor's degree within the normative timeframe if they first enter a community college rather than a four-year college (Dougherty 1992). If indeed mechanisms for softly reorienting the goals of community college students remain active at community colleges today, we would expect to see an overall downgrading of expectations vis-à-vis the community college experience just as the seminal works discussed above predict. Yet, among the high school class of 1992, over half (59 percent) maintained their expectations for a bachelor's degree, about a fifth (19 percent) raised their expectations to a bachelor's degree, and about 7 percent lowered their baccalaureate expectations within two years of high school (Adelman 2005: Table 41). Reflecting these and other trends, an emerging idea of "warming up" has appeared in more recent research on this topic (Adelman 2005; Clark 1980; Deil-Amen 2006), alongside mounting evidence of (un)changing expectations of earning a bachelor's among contemporary youth (Alexander et al. 2008; Andres et al. 2007; Johnson and Reynolds 2013). That is, the modal experience over the transition to adulthood is one of steady educational expectations. Taken together the evidence suggests much is to be gained by focusing on the immediate condition of youth's postsecondary experiences during the prolonged transition to

adulthood in addition to more traditional research focused on family of origin and other ascriptive characteristics (Rindfuss, Swicegood, and Rosenfeld 1987).

1.2. Key Terms and Definitions

Community colleges have evolved over the past century to serve an ever wider and more diverse array of students. First known as "junior colleges," the community colleges of the early 20th century focused largely on preparing traditional-age students who would continue on to four-year institutions to complete their baccalaureate degree (Cohen and Brawer 2008). After exponential growth around mid-century and following the influential Truman Commission report, which was the first to coin the term "community colleges," as the institution is widely known today, community colleges were called on to expand their mission to include preparing students for terminal occupational degrees, as well as other workforce development and continuing education functions (Ratcliff 1994).

While a fuller discussion of these transitions is included in Chapter 2, a note about the various names assigned to community colleges and how these names are used in this dissertation is worth of mention here. I use a broad definition of "community colleges," including institutions focused on the academic transfer mission, as well as those with dominant occupational programs or even short-term on-the-job training offered through the workforce development and continuing education arm of community colleges. That is, the terms "community colleges" and "two-year institutions" are used interchangeably throughout this dissertation. However, because I use data from a traditionally-aged cohort of youth, my analysis is limited to the intersection of two-year institutions in the lives of traditionally-aged students only, generally defined in the literature as students between 18 and 24 years of age, which follows the designations used by the U.S. Department of Education. Further, given the local nature of the dataset and the reality that

community colleges are inherently local institutions, my results speak only to the experiences of contemporary youth originating from St. Paul, Minnesota, where this study is based. However, given the paucity of longitudinal data with which to explore these intersections, the YDS are ideal for the questions asked here (see Chapter 3 for data details). Further, given the stronger position of technical two-year colleges within Minnesota's statewide higher-education system relative to that of other states, it serves as a conservative test for the ideas explored here (Shaffer 2008).

In addition to using the terms "community colleges" and "two-year institutions" interchangeably and defining "traditionally-aged" college students as 18-to-24-year-olds, I refer to "postsecondary educational expectations" and "bachelor's degree expectations" interchangeably in this study. While there is certainly heterogeneity within the broader reference to "postsecondary" educational expectations, as established above, earning at least a bachelor's degree is the modal expectation among contemporary students and parents alike. Further, the weight of the empirical evidence has shown that earning a bachelor's degree leads to higher earnings levels on average (Carnevale, Strohl, and Melton 2011). For example, using data from the 70s and into the mid-80s, Hout (1988) showed that the relationship between socioeconomic family of origin and destinations for males and females decreased by a third. What's more, this was explained by the large increase in college degrees, providing support on one hand for the American ideal of equality of opportunity, even if overall upward mobility remained unchanged over the same time due to declining structural mobility. Interestingly, as adults with college degrees account for a higher proportion of the population, there is some evidence of educational upgrading beyond the normative level of a bachelor's degree. For example, Torche (2011) shows while in the 1970s, only 6 percent of men and 2 percent of women had advanced degrees, this

was up to 11 percent and 10 percent respectively by 2002-06. This ratcheting up of expectations beyond the bachelor's degree is a phenomenon worthy of more study. However, given the questions posed here and limitations due to sample size in the data used, this study focuses on persistence and change related to the expectation of earning at least a bachelor's degree as the point of interest within postsecondary educational expectations more broadly.

1.3. Summary and Chapter Outline

As highlighted above, my dissertation examines both the macro-structural context of community colleges as an institution and how changes in the structure and form of community colleges today play out at the individual level. Given macro-level changes, how, if at all, do postsecondary educational expectations change and what are the mechanisms at play for contemporary youth? While connected, my analyses of community colleges at the macro-level and of individuals as they transfer through community colleges and other postsecondary institutions over the transition to adulthood, represent the blending of two stand-alone studies. First, my macro-level study (see Chapter 2 below) represents an analytical review of what the expansion of community colleges is doing to the institution and how it fits into higher education more generally. My individual-level analysis (see Chapters 3 and 4 below) then examine the postsecondary attendance trajectories of a cohort of contemporary youth, as well as how these youth think about education over the transition to young adulthood and into their early thirties.

Chapter 2 consists of three sections. The first summarizes how the intersection of educational expectations and institutional attendance have traditionally been explained in the sociology of education literature by teasing out what has been the perennial question on community colleges. That is: Do community colleges act as democratizers or agents of diversion for the students they serve? Secondly, I analyze three new macro-level features of the

community college not anticipated in earlier theoretical explanations of the role of community colleges in students' lives. Specifically, I look at the expansion of the sector, which I refer to as "Ubiquitous U" to reflect its reach in the United States and worldwide. Next, I focus on the increasingly complex attendance patterns of contemporary youth who are "Here, There, and Everywhere" in today's postsecondary world. As Adelman (1999, 2006) and others (Goldrick-Rab 2006; Goldrick-Rab and Pfeffer 2009; McCormick 2003) have shown, today's students do not travel through their postsecondary educational experience in a linear, constant fashion. Rather, they swirl about: moving in and out of institutions, attending multiple institutions simultaneously, and undergoing reverse and lateral transfers at alarming rates. These realities stand in contrast to commonly held notions of a traditional-age student stepping on an idyllic college campus the fall after s/he has graduated from high school and attending uninterrupted for four years, and completing their degree on time. Beyond institutional changes, students undergo status changes regularly. For example, a student may go from part-time student and full-time worker, to full-time worker, and back to full-time worker, part-time student all within a given year. What are the implications of these shifts for community colleges? The third feature discussed is that of the growing academic model across all institutional forms, including the community college. Far from their earlier images as preparing students for vocational or occupational careers, the primary mission of the majority of two-year institutions is that of preparation for transfer to a four-year college or university (Cohen and Brawer 2008; Reed 2013b). What's more, even within more traditional vocational curricula, "vocational articulation" is becoming the norm, which can be best thought of as building continuous pathways from noncredit- to credit-bearing courses within the two-year sector (Dougherty 2012; Grubb, Badway, and Bell 2003). Additionally, what are the implications of a growing presence of

dormitories on two-year campuses, community college baccalaureate awards, changing faculty roles, stratification within the community college, and the development of articulation agreements between community colleges and four-year institutions? Finally, Chapter 2 closes with a discussion of what these institutional trends mean for traditional and emerging theories about the role of community colleges in society and its future, as well as for policymakers. Special attention is given to thinking about the role of community colleges in the schooled society (Baker in print).

In Chapter 3, I use longitudinal data from the ongoing Youth Development Study (YDS) to both set up the empirical analysis in subsequent chapters and to descriptively build the case for the growing importance of understanding the intersection of institutional attendance, family background, and academic factors in the lives of "inter-institutional attenders," a group which has not received enough attention in existing research on the linkages between education, family, work, and life over the transition to adulthood for contemporary youth. Inter-institutional attenders are students who attend two- and four-year institutions to varying degrees throughout their postsecondary experience. Historically, this group is either ignored (e.g., in models capturing current institutional attendance only) or soaked up in a four-year category (e.g., in models capturing highest postsecondary institution attended). The detailed, longitudinal nature of the YDS data allow me to follow students from their senior year of high school in 1988 until they are in their thirties. As such, these data present a fuller picture of students' postsecondary attendance over the prolonged transition to adulthood, allowing me to present the most current picture to date of inter-institutional attenders. Also of note in this chapter, I detail the four bachelor's degree trajectories studied here. The first two can best be thought of as capturing change in educational expectations over the transition to adulthood – namely, the cooling out

identified in earlier theory and the newer conceptualization of warming up. The final two trajectories capture persistence in educational expectations, but at opposite extremes: those who never expect to earn at least a bachelor's degree (steady low) and those who always expect to earn at least a bachelor's degree (steady high), whether or not they actually do. Chapter 3 closes with a discussion of limitations with the existing data.

Next, Chapter 4 answers the empirical questions at the heart of this inquiry: To what extent, if at all, do institutional attendance, family background, and academic factors explain the downward leveling of educational expectations vis-à-vis the community college experience predicted in earlier theories (i.e., cooling out)? Additionally, two methodological questions are answered. First, how do these understandings change when we expand the longitudinal frame within which we study the role of the two-year sector in the lives of contemporary youth? And, finally, how do they change when we account for inter-institutional attendance patterns introduced in Chapter 3, rather than more commonly used indicators of current institution attended or highest institution attended? Based on my own experiences working with students, faculty, staff, and administrators within the community college sector, as well as educational policy makers at the state level, I hypothesized from the onset that institutional and individual-level changes would challenge traditional ideas about community colleges as the primary "cooling out" agents in the inherent mismatch between culturally encouraged aspirations and individual abilities in democratic societies, especially for those at the margins of educational expectations (i.e., those who are "at risk" of cooling out versus warming up) and I find support for that here. I also find continued support for Brint and Karabel's diversionary thesis and for the implications of Rosenbaum's college-for-all ethos, at least for those students at the educational expectation extremes (i.e., those who consistently expect to earn at least a bachelor's degree and

those who never expect this, called steady high versus steady low in the categorizations used here).

Finally, Chapter 5 consists of three parts. First, I discuss the implications of this study for theory, research, and policy. This research is particularly timely given the recent federal-level push for college completions (U.S. Department of Education 2011a). For example, the Obama Administration's goal for the United States to have the best-educated workforce and the highest proportion of college graduates in the world by 2020 means new structures are being put into place which further dampen the "cooling out" dynamics discussed in earlier theory. What are the implications of such policies, especially for students who don't fit the academic model? Next, I discuss what the findings of this study might mean for the community college of the 21st century. That is, what can this study tell us about the future of the community college model? Finally, I close with a discussion of directions for future research on community colleges and the students they serve.

Chapter 2

Community Colleges in the Schooled Society

This chapter considers existing theoretical explanations related to the purposes and growth of community colleges since the mid-nineteenth century in light of emerging macro-structural shifts in how community colleges and the students who attend them operate. How do traditional theories explain community college expansion, as well as recent changes in the structure and form of community colleges, such as the emergence of functions historically endemic to four-year colleges and universities? For example, new features of the community college – ranging from the presence of dormitories and baccalaureate degree programs at two-year colleges to changing faculty roles and streamlined transfer processes between two- and four-year institutions through articulation agreements – paint a picture of increased homogeneity in the structure and form of community colleges and four-year institutions in the United States. To answer these questions, I first provide some additional detail about the dominant theoretical perspective guiding research on community colleges and their students, before analyzing three key institutional trends that are at the heart of the current condition of the two-year sector, including 1) the expanding size of the sector; 2) the changing postsecondary pathways of students who attend community colleges; and 3) the growing strength of the academic model. In closing, I consider what these three new institutional trends mean for traditional and emerging theories about the role of community colleges in society and its future, as well as for policymakers.

2.1. Community College Theory: Democratizing or Diversionary Effects?

Over twenty years ago in the highly influential sociological analysis of community colleges, *The Diverted Dream,* Steven Brint and Jerome Karabel (1989b) predicted that if trends

continued the two-year institution would likely become completely isolated from the system of higher education. And with the sector's transfer to a four-year system left completely dysfunctional and suffering from future astronomical attrition rates and growing educational irrelevance, these institutions would all but disappear from the academic landscape. So clear to the authors was the pending demise of the original dream of the two-year sector as "Democracy's College," that they suggested private corporations would replace them with their own versions of trade schools and the academic mission of the community college would vanish. This has not come to be. In fact, much the opposite has occurred.

As we learned in Chapter 1, more than half of U.S. undergraduates in public institutions in the United States are enrolled in community colleges and a substantial number of these students go on to attend and even complete a four-year degree (Snyder and Dillow 2012). Recent data from the National Student Clearinghouse (NSC) show that 45 percent of all students who finished a four-year degree in 2010-11 had previously enrolled at a two-year college at some point, with 19 percent of these completers attending two-year institutions for the expected three or four terms, but a full 12 percent having been enrolled for at least 10 terms (NSC Research Center 2012). This fluidity between two- and four-year institutions also extends to the ever-growing graduate student population. Data from the Survey of Earned Doctorates show that over a tenth (12 percent) of doctoral earners in 2009 had attended a community college at some point on their path to the Ph.D. (National Science Foundation 2010).

Notably, Brint and Karabel were not alone in their misdiagnosis of the role of the community college in modern society. Burton Clark (1960) whose seminal sociological analysis of the institution resulted in the oft-used but little understood term "cooling out", made his own set of predictions about the community college's role in handling (or not handling, in some

cases) of "latent terminal" students, which have not played out over time. In fact, Brint and Karabel's 1989 analysis was, in part, an attempt to revisit Clark's initial work and better understand what has become the perennial question in research on community colleges and their students: Does this institution, once dubbed "Democracy's College" deliver on its promise of expanding educational opportunity for all? Or, does it contribute to an illusion of opportunity, while serving as a diversionary force, especially for those students who are least likely to attend postsecondary education?

Even more recent theories attempting to explain the intersection of institutional attendance and educational expectations, such as James Rosenbaum's college-for-all ethos (2001), hang-on to more pessimistic views of the role of community colleges in the lives contemporary students. Rosenbaum's college-for-all ethos recognizes widespread expectations of earning at least a bachelor's degree among contemporary youth, but suggests that the presence of community colleges (and their open access mission) in the system of higher education become problematic, particularly for nontraditional postsecondary educational students (a misnomer in need of revisiting in its own right as the majority of college students today are indeed "nontraditional," see Kim 2002). How so? According to Rosenbaum (2011a), the mere presence of a "fall back" option translates into diminished effort in high school. And, indeed, the weight of empirical evidence shows that high performance in high school is a strong, positive determinant of future postsecondary academic and occupational success (Adelman 1999, 2004, 2006).

While all picking up on real trends in their times, what all these theories underestimate are changing trends in the sector, not to mention changing demographics and individual-level realities of students and faculty populations alike. Better data and more sophisticated methods

are now showing us that the answer isn't as simple as the dichotomy posed by the classic democratizing or diversionary question. In actuality, the community college experience operates differently for different groups – in the language of social scientists: there's a great deal of heterogeneity in community college effects (Brand, Pfeffer, and Goldrick-Rab 2012), just as there is in four-year colleges and universities (Brand and Xie 2010). What's especially interesting, however, is that the community college operates in the opposite direction assumed in these early influential studies. For instances, Brand and her colleagues (2012) find a strong democratizing effect for disadvantaged community college students, who would otherwise not have attended college, but a diversionary effect for their relatively more advantaged peers. In fact, they find that, at least among graduates of public high schools in Chicago, disadvantaged students, who would otherwise not have attended college, are 93 percent more likely to earn a bachelor's degree if they enroll in a two-year institution. Far from the original conception of cooling out of those for whom higher education of an academic persuasion isn't a good fit, community colleges appear to hold the most benefit for students least likely to attend college, compared to their better-off peers.

The predictions of *The Diverted Dream* and other early accounts like it (Bowles and Gintis 1976; Brint and Karabel 1989a; Zwerling 1976) were so influential that what has actually occurred has been left in a sociological no-man's land. There is little explanation of why what has occurred is so different from the scenario predicted above. Why did otherwise reasonable predictions not come true? Interestingly, what did occur is not the original goal and design either. To answer these questions, I first provide some additional detail about the dominant theoretical perspective guiding research on community colleges and their students, before analyzing three key institutional trends that are at the heart of the current condition of the two-

year sector, including 1) the expanding size of the sector; 2) the changing postsecondary pathways of students who attend community colleges; and 3) the growing strength of the academic model and considering what these trends mean for new frameworks for understanding community colleges and their students.

2.1.1.Democracy's College

One dominant explanation has been that community colleges serve a necessary function in society, particularly democratic societies with strong contest mobility regimes, of providing a way of ensuring all members of our society have access to higher education. This view is best represented by the work of Burton Clark (1960) in sociological research on community colleges and their students, and tends to fall in the community colleges as democratizing agents camp. Clark's seminal study and subsequent article on the cooling out function is based on a case study of San Jose Junior College in the late 1950s. Interviewing mostly guidance counselors and some faculty and administrators (note he did not interview students), Clark came to understand community colleges as providing an institutionally accepted means of mediating the inherent imbalance in modern society, particularly democratic societies, of culturally encouraged ambitions on one hand and limited levels of ability and opportunity on the other. Through the community college experience, and through counselors in particular, "latent terminal students" (so named by Eells, an early advocate of community colleges, see Cohen and Brawer 2008) were *softly* reoriented to understand different goals. Clark detailed a variety of means through with this process happened from movement to terminal occupational programs (i.e., from academic transfer ones) and gradual disengagement to outright denial. When Clark revisited his "cooling out" conception twenty years later he did concede evidence of some warming up but maintained a central question in his original argument: That is, if community colleges don't fulfill this

function, then who will? From this lens, cooling out was and still is seen as a functional positive (Clark 1980).

Indeed, community colleges today are increasingly referred to as an educational social safety net, and in many ways this supports the cooling out conception. However, a closer look at the evidence proves problematic for a strictly functional interpretation. Cooling out is no longer a phenomenon isolated to community college students, nor is it isolated to students from low socioeconomic backgrounds as a more Marxist interpretation would have it. Non-trivial percentages of students who start at four-year institutions now reverse transfer to community colleges, about 19.5 percent of students starting at four-year institutions transfer to other four-years ("lateral transfer") and 15.5 percent transfer from four- to two-year colleges ("reverse transfers") (Goldrick-Rab and Pfeffer 2009; Kalogrides and Grodsky 2011).

2.1.2. Agents of Diversion

In the work of Brint and Karabel, we see another possible explanation. From this view, community colleges operate to preserve the elite states of four-year institutions and serve the economy, just as traditionally functional explanations would have it, but the motive is different. The central thesis is that the occupational mission of the community college is taking over its initial academic purposes and thereby subverting the baccalaureate aspirations of community college students, who are disproportionately from lower-income backgrounds than their four-year peers. Particularly problematic for Brint and Karabel (1989a) is that because community colleges exist and thereby provide students with the hope for upward mobility, they serve to legitimate inequality. Drawing from both the Marxian and cultural capital paradigms, conflict scholars view education as serving to reproduce the social structure and, in extreme cases, doing so with devious intent to maintain the power of those already having elite status (Bourdieu 1973,

1986; Bowles and Gintis 1976; Collins 1979; Lareau 2003; see also DiMaggio 1982, although he allows for the possibility for less advantaged students to obtain the cultural capital needed for mobility).

Indeed, we do see differences by class. Take, for example, Hilmer's (1997) evidence that amidst other structural shifts, a growing proportion of students are choosing to start at community colleges to "prove" themselves when they don't get into their institution of choice. This, alongside evidence from Dowd, Cheslock, and Melguizo (2008) that transfers from community colleges to private elite institutions are over-represented by students from top economic quintiles, is suggestive of Townsend's (1999)forecast of a middle-class takeover of the institution and some potentially troubling trends for the institutions traditional role of serving underserved students. Further, the community college baccalaureate gap is real. A range of studies from the late 1980s and early 1990s showed that community college starters are 11 to 19 percent less likely to earn their baccalaureate degree within about eight years of high school graduation than otherwise similar students starting at four-year institutions (Alba and Lavin 1981; Anderson 1981; Dougherty 1992; Velez 1985).

However, growing evidence of heterogeneity of effects within the community college student population doesn't operate in the direction this view would predict. As discussed above, Brand et al. (2012) show that community colleges actually work better for those who wouldn't otherwise attend college, but not as well as those who would otherwise attend four-years. More recent research has also used propensity score matching to get at issues of selection (Long and Kurlaender 2009; Reynolds and DesJardins 2009; Stephan, Rosenbaum, and Person 2009). Interestingly, Long and Kurleander (2009) find a community college baccalaureate gap of around 14.5 percent using census, administrative data from the state of Ohio and following

student for about six years from high school completion. They also find a similar gap when making comparisons between four-year institutions of varying selectivity.

James Rosenbaum's (2001) college-for-ethos thesis also predicts a downward leveling of ambition. Both the college-for-all thesis and research in the diversionary effects tradition suggest that the lessened ambition is more likely to happen among youth with high expectations and limited resources and those who attend two-year colleges. Where, they differ, however, is in the types of resources focused on. While Brint and Karabel and those following them have focused predominantly on class (or family socioeconomic status as measured in this study), Rosenbaum's focus is on academic factors in high school. From this view, recent reports citing taxpayer costs as high as $1-billion at the hands of community college students who drop out of college before completing their first year are particularly problematic (Johnson 2011; Schneider 2011). Critics say the proliferation of community colleges and other second-chance institutions mean students, and particularly low-resource ones, aren't exerting enough effort in high school (Rosenbaum 2011a). Without this early effort, they are less likely to succeed down the educational pipeline (Adelman 1999, 2004, 2005, 2006).

2.2. Modern Features of the Community College

Much has happened in the institutional form and function of community colleges over the past quarter century since the development of Clark's cooling out hypothesis, Brint and Karabel's diversionary focus, and Rosenbaum's college-for-all ethos, not to mention to the demographic make-up and life course transitions of traditional-age students who attend them. In the richest descriptive portrait of contemporary youth to date, Adelman (2005) uses transcript-based data from the National Educational Longitudinal Study of 1988 to confront the traditional censure of community colleges for cooling out and diverting students from what the critics

believe are more productive educational environments. Contrary to traditional cooling out analyses, Adelman finds that the experience of attending a community college has, on balance, a positive effect. Nineteen (19) percent of the 12th-graders from the High School Class of 1992 who first entered community colleges raised their education expectations to the bachelor's-degree level by the spring of 1994 compared with 7 percent who lowered their expectations from that level. What's more, any observed diversions happened within the history of students who were occupationally oriented, particularly in getting through key "gateways" such as remedial mathematics. While more attention is paid to individual-level changes in expectations, here I identify key institutional trends playing a role in these shifts. How is today's community college different than that of Clark's at mid-century, Brint and Karabel's in the late 20th century, and even Rosenbaum's at the turn of the century? I have applied the titles "Ubiquitous U," "Here, There, and Everywhere" and "Mini-Harvards?" to get across the core ideas picked up in these trends: namely, 1) the sheer size of the sector today, 2) changing pathways of contemporary youth within and between the two- and four-year sectors, and 3) the continuous drift to the academic mission of the community college, respectively. As Gary Rhoades (2007) has so eloquently pointed out there's value in creating key terms to parsimoniously capture major analytical points, something Clark himself did quite well. There is, of course, some risk in this course of action. After all, perhaps part of the reason the "cooling out" label has stayed attached to community colleges long after its useful shelf life is that it says so much with so little. With this caution, however, I proceed with a discussion of the three key trends transforming the two-year sector today.

2.1.1. Ubiquitous U

From modest beginnings of only 20 such institutions in the United States in 1909 (Cohen and Brawer 2008), community colleges have grown to at total of 1,729 at the most recent count (Snyder and Dillow 2012). On the surface this may seem inconsequential given what we know of the expansion of education as an institution over the past few centuries (Baker in print). Indeed, the entire higher education pie has gotten larger, especially over the second half of the century and into our current era. However, community colleges have come to comprise a larger proportion of the higher education pie over this time.

Figure 2.1 shows that whereas community colleges accounted for around a quarter of all higher education institutions in the 1950s (28 percent), they have grown to account for roughly 40 percent of the higher education pie since the 1990s. While many scholars are aware of the role of the G.I. Bill around mid-century in driving much of this expansion, with many veterans returning from war and able to enroll in community colleges at a discounted rate, a careful reading of history shows many different streams of influence in the growth of this institution, including community-level boosterism and activism on the part of research university presidents, points to which I return later (Frye 1992; Ratcliff 1994).

As suggested by their early name of "junior colleges," the two-year sector was initially seen primarily as a place to fulfill general education requirements in preparation for academic transfer to a four-year college or university (Cohen and Brawer 2008), although vocational programming was always present in some form (Ratcliff 1994). It was actually The Truman Commission's (1947) report that suggested the name "community college" be applied to the institution in keeping with its primary purpose to serve the educational needs of the local community through "curricula of various lengths." The "vocational" side of the community

college house grew from the 1960s through the late 1980s – though it has been long passé to refer to it as such. Terms such as "career and technical education," "occupational education," "workforce development," and/or "continuing education" have all been found more in-line with the dominant ideology and have all had their time in the limelight over the intervening decades. In true Weberian fashion (1946), debates over the appropriate balance between the academic and vocational missions of the community college have raged since, a point to which we return later. Also important for our discussion here is the fact that the academic transfer mission of the community college has been the clear winner since the 1990s (Adelman 1999, 2006; Dougherty and Kienzl 2006).

Interestingly, the growth of this institutional form is not limited to the United States, or even to developed countries (Kintzer 1979). Community college-like institutions continue to grow internationally and account for a non-trivial proportion of higher education expansion worldwide. This growth is occurring both through partnerships with community colleges in the United States and as adaptations to existing postsecondary vocational education systems in developing countries (Elsner, Boggs, and Irwin 2008; Raby and Valeau 2009; Spangler and Tyler 2011). These institutions go by a variety of names which has diminished their voice and, thereby, the attention paid to their important role in educational expansion in the literature.[2] Increasingly, however, the distinctions between institutions carrying a variety of names – from technical colleges and polytechnics to regional and community colleges – are becoming blurred (Raby and Valeau 2009). In their study of the traits that define community college-like institutions in more than 20 countries, Elsner *et al.* (2008) find four common traits of these

[2] Elsner *et al.* (2008) list the following potential names: community colleges, technical colleges, technical universities, polytechnics, further education institutions, technical and further education institutions, institutions of technology, colleges of technology and junior colleges. See also Raby and Valeau (2009: Table 1.1) for a list of specific names of community college models worldwide.

institutions across countries: (1) open access (for the most part); (2) a non-elitist orientation; (3) a focus on student learning; and (4) more flexibility in response to the local environment. Raby and Valeau (2009) add (5) short-term, semi-, and professional terminal courses, (6) an academic curriculum resulting in an associate in arts or sciences, and (7) (in some cases) the means to transfer to four-year colleges and universities to the characteristics emblematic of this form of postsecondary education.

2.1.2. Here, There, and Everywhere: Today's Postsecondary Student

One standard approach to measuring institutional size is through student enrollments. Unsurprisingly, just as the number of community colleges grew over the century, so too did the number of students passing through its doors. Figure 2.1 shows how community college enrollments have grown to account for an ever-larger portion of the higher education pie, especially since mid-Century and when limited to undergraduates at public two- and four-year institutions. Community college enrollment in the United States grew from about 850,000 in the early 1960s to over 4.5 million by 1980 and roughly 7.5 million by 2011. This growth has persisted despite the decline in the relative size of the traditional college-age population over the late 1970s and into the 1990s. Today community colleges represent close to half (47 percent) of all enrollments in public, degree-granting institutions in the United States (Snyder and Dillow 2012: Table 223). This proportion increases to more than half (52 percent) when limited to undergraduate enrollments in public institutions (Table 240). Two-year institutions also account for 42 percent of traditional-age students (i.e., 18-to-24-year-olds) enrolled in the American public higher education system (Table 226). Further, community colleges serve a disproportionate number of minority students, who are themselves over-represented in lower

socioeconomic strata. In 2011, over half (54 percent) of students attending two-year colleges were nonwhite compared to about 34 percent of all four-year students (Table 264).

Higher education observers, middle class parents left strapped by the 2008 recession, and even politicians and policymakers are increasingly taking note of this expansion (Bailey and Jacobs 2009; Goodnough 2009). But what few recognize is the degree to which standard statistics understate the true size of the two-year sector. What the above numbers fail to take into account is the "noncredit" side of the community college house (Levin 2007).[3] Though relatively little is known about this portion of the sector (in no small part because federal statistics aren't required), most estimates put it at around 5 million students nationally (AACC 2012; Grubb et al. 2003; Levin 2007). It is important to realize, that the numbers do include enrollments in credit-bearing, vocationally oriented (or occupational) courses and programs, the very "track" Brint and Karabel predicted would swell with enrollments of minority and socioeconomically disadvantaged youth part of a covert operation of a business and power elite to both ensure workers to maintain their own advantage and to maintain the elite stature of the four-year institution. While I save a deeper discussion of this shift for later sections, this serves as a solid foundation for understanding just what "community college" students look like today.

In perhaps the most in-depth descriptive account to date of the role of the community colleges in the lives of contemporary youth, Adelman (2005) shows that among those students in the high school class of 1992 who first attended a four-year college, about a quarter (26 percent) also attended a community college at some point within the eight years following high school

[3] "Noncredit" education is often discussed without a clear distinction about what all it encompasses. Indeed, the term "noncredit" means different things to different institutions and in different state systems. Increasingly, however, this is in reference to programs such as workforce development, continuing education, adult basic education, English as a second language, and in some cases, remedial or developmental education, where participants do not earn college "credit" upon completion. Instead the focus is often on certification, licensure, or preparation for a test that upon passing leads to credit bearing coursework.

graduation. This back-and-forth movement between two- and four-year institutions now extends to the postgraduate population. Recent data on the enrollment histories of all doctoral earners in the United States show that 12 percent attend a community college at some point on their path to the Ph.D. and its various forms (National Science Foundation 2010). Far from the traditional view of one-way transfer from two- to four-year institution, the majority of contemporary college-age students attend multiple postsecondary institutions over the course of their transition to adulthood, sometimes simultaneously.

With all this movement within and across institutional types, one might expect to see highly elastic educational expectations. And, in point of fact, this reality was at the core of early work on community colleges and their students, including Brint and Karabel's work. What happens when there is a discrepancy between educational and occupational ambitions on one hand and economically and socially structured opportunities and abilities on the other? Drawing from Clark's "cooling out" hypothesis, Brint and Karabel highlight the role of the community college in processes of educational and social selection. That is, the processes by which the institutional itself covertly channels the aspirations of its students away from four-year colleges and universities into terminal two-year programs, and in so doing, plays a non-trivial role in existing social inequalities. This is a particularly problematic scenario for an institution whose very mission centers around the ideas of educational opportunity for all so endemic to American society.

What no one at the time could have predicted was the extent to which educational expectations among traditional-age students would change over time. Using an array of longitudinal and largely national datasets from traditional-age cohorts in the 1970s, 1980s, 1990s, and current era, and supplementing their analysis with Census data, Reynolds et al. (2006)

show just how dramatically educational expectations have changed over the second half of the twentieth century and into the twenty-first. If we detach the cooling out label from community colleges for one second and apply it to all of postsecondary education, we see a definitive shift from cooling out to a warming up of educational ambitions. Whereas 55 percent of teenagers expected to attend college in the 1950s, by the 1990s and 2000s, the percentage was more than 90 percent (Ingles and Dalton 2008; Schneider and Stevenson 1999). And as some scholars predicted in the 1990s (Baker and Stevenson 1994), advanced education (i.e., masters, doctoral, and other professional degrees) now marks an area of significant growth in higher education (Torche 2011). Reynolds et al. (2006) show that over half of high school seniors today expect to earn an advanced credential at some point in their life.

2.2.3. Mini-Harvards?: The Growing Academic Model

When I first began writing this chapter, I had intended to title this section the "New Community College." In reviewing the literature, however, I learned that there was in fact a New Community College already in existence. And what I learned about this new institution within the City University of New York system served to highlight my intended point (although I did opt for a different phrase in the end). Analyzing the changing form of this New Community College raises a larger question: Are community colleges becoming mini-Harvards? This is a bold question, but the New Community College case highlights some rather seismic shifts within the institution. A multimillion-dollar experiment in how to fix what ails the community college funded by the Lumina Foundation among others, the New Community College features mandatory full-time enrollment for the first-year, mandatory and frequent tutoring and counseling, no remedial coursework options, and required information sessions during the application process, to name but a few defining traits (Pérez-peña 2012). While the New

Community College represents an extreme case to be sure, the more interesting point sociologically is that this model is based on evidence of best practices from two- and four-year institutions alike and in so doing highlights the growing strength of the academic model within the two-year sector.

Despite disagreement on the size and relative weight of democratizing and diversionary effects, researchers have generally agreed that community college students face barriers to accomplishing their baccalaureate goals. After synthesizing the existing research on the impact of community colleges and other postsecondary institutions on education attainment and economic success, Dougherty (1987) developed a three-factor model for explaining factors that impede community college students from reaching their goals: 1) attrition from the community college; 2) issues with transfer; and 3) attrition after transfer. He likens these factors to a funnel-like system, such as Rosenbaum's (1976) tournament mobility system and Turner's (1960) contest mobility system. For example, Dougherty points to the lack of dorms and distractions of off-campus living as particularly problematic to community college completion, not to mention the presence of a disgruntled community college faculty. Provided students can make it through the community college, they are then faced with the loss of credits as they transfer to a four-year institution, all amidst pressure to shift to a noncredit/vocational program instead of continuing on the academic track.

What has happened since? Here, I introduce some new macro-level features of the community college not anticipated in these and other early theoretical explanations of the role of community colleges in students' lives. Specifically, I look at 1) the rise of articulation agreements to facilitate transfer, 2) the growth of baccalaureate degrees awarded through two-

year institutions, 3) presence of dormitories and honor's programs on community college campuses, and 4) even growing research functions through changing faculty and funding norms.

The Rise of Articulation Agreements. By "articulation agreement," I am referring to policies enacted between postsecondary institutions or at the state-level to facilitate the transfer between institutions, particularly from two- to four-year institution. As such, they represent the most notable intervention targeted at resolving the second factor of Dougherty's three-factor model. Though the question of whether articulation policies do or do not improve transfer rates is beyond the scope of this paper (see Roksa and Keith 2008 for recent research on this topic), their growth since the late 1980s highlights the growth of structures supporting the academic model.

Anderson, Alfonso, and Sun (2006) show that 23 states adopted or amended articulation agreements between 1985 and 1995, representing 79 percent of all such agreements by 1995. Table 3 below shows a more recent and more detailed summary of the number and form of such agreements in 2001 and 2010. Across a broad range of articulation elements, we see that the number of such agreements increased across the board.

What's particularly interesting to Anderson et al. (2006) is that states started enacting these in the late 1980s and early 1990s, when the occupational mission of community colleges appeared to be gaining strength (Brint and Karabel 1989a, 1989b). Even in the absence of demand from community college entrants, states were busy enacting such agreements to deal with the stagnation of higher education appropriations (despite bigger budgets overall and continued growth in the size of higher education), spiraling tuition costs, and excess demand for affordable higher education. The result has been an unanticipated middle-class takeover (see Townsend 1999) of the community college which has led to what Anderson et al. (2006) have dubbed the "new cooling out process," whereby students are cooled out at the onset creating a

tiered institutional tracking system that benefits middle-class students. This has become even more pronounced in the accountability age and with dwindling state- and local-budgets. Community colleges are under pressure to "perform" accordingly to standards which favor more traditional four-year students, such as showing completions and graduations within the normative time frame. As institutional resources are shifted to support students with these goals, increasingly middle-class students, they are shifted away from the needs of their socioeconomically and academically disadvantaged peers who are more likely enrolled in pre-college, remedial, and other noncredit areas which are not supported by Federal financial aid programs (Pusser and Levin 2009).

Community College Baccalaureates. Yet another trend that no one could have foreseen at the time of *Diverted Dreams* has been the growth of baccalaureates awarded through the community college. Russell (2010) reports that the number of states approving at least one community college to offer a baccalaureate program has grown steadily over the past decade, as have the number of institutions and degree programs approved. As of 2010, there were 18 states where a total of 54 community colleges offered a total of 465 baccalaureate programs, up from 11 states having 21 such community colleges and 128 such programs in 2001 (see Russell 2010 for a detailed accounting). A closely aligned trend is that of universities opening branch campuses up on community college campuses (Fonseca and Bird 2007).

Dormitories, Honor's Programs, and Student-Faculty Research. With the shifts identified above, it should perhaps come as no surprise that structures and programs traditionally endemic to four-year institutions have grown and continue to grow on community college campuses further strengthening the academic mandate of the two-year sector and blurring distinctions between two-years and some four-year institutions. Several of the trends highlighted

here fall under the umbrella of "academic and social integration," which was the focus of much early research on community college students compared to their four-year counterparts. Whereas Dougherty's three-factor pointed to a weakness in the academic and social integration of community college students with the institution as a point of failure, more recent research from Dougherty himself shows that academic and social integration no longer mediate the likelihood of transfer from two- to four-year institutions (Dougherty and Kienzl 2006). While students from higher socioeconomic backgrounds still have higher transfer rates than their more disadvantaged peers, this gap is explained by pre-college academic performance and aspirations and not by academic and social integration during college.

While we don't know from this what has caused the shift, trends such as the presence of dorms on community college campuses and active student service programs featuring honors programs and more student-faculty research at the community college level show a shift in the institutional realities since Dougherty developed is three-factor model (Cohen and Brawer 2008; Moeck et al. 2007; Murrell and Denzine 1998). At the same time means of better integrating community college students in academic and social life have expanded, student attendance patterns at four-year institutions increasingly resemble those in the two-year structure. Today, both two-year and four-year institutions are serving a diverse array of student needs, from traditional-age students who want a "traditional" college experience whether they are at a traditional or nontraditional college campus to many adult students who juggle work and family roles while going to school. These trends suggest increasingly similarity in the structure and form of different institutional types.

Changing Face of Community College Faculty amidst the Education Revolution. Far from the "disgruntled faculty" (Dougherty 1987) depicted in early studies, today's community

college faculty increasingly look like their four-year counterparts. At least among the full-time ranks[4],community college faculty today are highly educated, involved in research and professional associations, and even leading the curve in some areas. Though not based on nationally representative data, Outcalt (2002) found that whereas only 15 percent of full-time community college faculty reported having their doctorate in 1975, nearly 25 percent of such faculty reported either having their doctoral degree or pursing it by 2002. Despite a classic view of community college faculty as focused on teaching and service to the local economy (Kempner 1990), community college faculty today are under increasing pressures to engage in academic research and even to secure funding for program and curricular development (Levin, Kater, and Wagoner 2011; Outcalt 2000, 2002). Over the past five years, a broad range of disciplinary associations have begun to take action to support community college faculty and students (Vitullo 2012). This movement alongside active publishing among community college faculty suggest a different group of teacher-scholars today (Rowell 2010).

Far from old ideas of an increasingly isolated and vocational-oriented institution presented above, we find that the academic charter of community colleges continues to expand and gain in strength, at least within the public community college sphere. We see through the trends highlighted above that community colleges today award baccalaureate degrees, have honor's programs, dormitories, and are increasingly awarded funding from agencies like the National Science Foundation to strengthen the research function. Further, though often viewed as the "losers" of the academic system, community college faculty themselves look very different today than when many of the initial theories about the role of community colleges in society

[4] While our focus here is on full-time faculty, the economics of higher education today mean that the ranks of part-time faculty have grown proportionately over time. While beyond the scope of this paper, the shift from full- to part-time faculty reflect changing structural realities that are closely intertwined with the arguments presented here.

were developed. In fact, Steven Brint has written that this is one area where he and Karabel got it wrong in their 1989 analysis: the academic mission has not been eclipsed by the occupational mission of community colleges as they had predicted. Along these same lines, Dougherty and Kienzl (2006) find that after losing some ground in the late 1980s and early 1990s, the academic mission of community colleges had strongly revived by the 21st century. Interestingly, Adelman (2004) finds evidence of an "academic drift," particularly (and unexpectedly) for minority students. Looking at the attendance patterns of the high school classes of 1972, 1982, and 1992, he finds that minority community college students are much more likely to be enrolled in general studies programs (the standard choice for students who intend to transfer to a four-year institution) in 1992 than they were in the earlier decades. This shift follows predictions of continued decline in vocational education and the growing power of university-like education (particularly research universities) in post-industrial society (Bell 1973; Benavot 1983).

2.3. New Theoretical Framework: Community Colleges in the Schooled Society

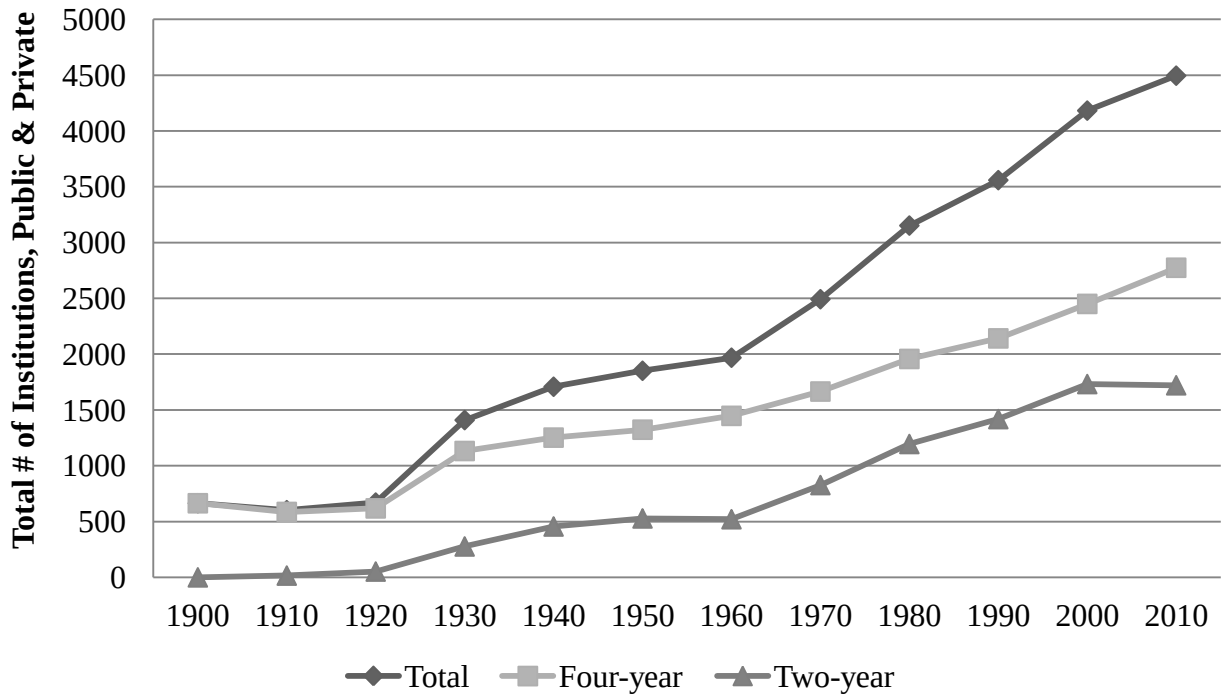
The trends detailed above paint a picture of increased homogeneity both within and across two- and four-year institutions, with successful innovations in one sector being copied in others, as well as internationally (Meyer et al. 2008). *Why* is what has occurred so different from the original charter? Why didn't Brint and Karabel's predictions of community colleges as separate from the rest of the academic pipeline come to fruition? What do the three institutional trends presented here mean for traditional and emerging theories about the role of community colleges in society and its future, as well as for policymakers? Taken together, the sheer ubiquity of the two-year sector, shifts in attendance patterns and expectations of contemporary youth, and the growing strength of the academic model suggest another possible explanation: the expansion of education has itself created revolutionary changes in our society.

Interestingly, one commonality observed with the traditional views discussed here is a tendency for community college supporters and critics alike to support expanding higher education opportunity, even if they disagree about the form it should take and of the competing interests involved. This finding serves as a case-in-point for the transforming reality of sending children to school for longer periods of time. As more and more individuals attain more and more education, it fundamentally changes how we as a society think and what we value (Baker in print). This sheds light on some of the underlying causal factors involved in these transforming institutional trends within the two-year sector. From this view, then, the expansion of community college education is just one part of the larger story, which is the worldwide expansion of higher education.

Indeed, there has been a profound policy shift in the United States toward education (especially community college education) as anti-poverty and economic policy across Republican and Democratic administrations alike in recent decades. While a full explanation of the shift toward education in anti-poverty policy is beyond the scope of this paper, a few notes are in order: The Obama Administration has consistently focused on the role of community colleges in workforce development, proposing increased federal funding to community colleges (even if this has not played out at the funding levels originally proposed). Additionally, the Administration is planning a Community College Summit in the fall, led by Jill Biden, wife of Vice President Joe Biden and a long-time community college faculty member, to increase awareness about the contribution of community colleges and learning more about their challenges, innovations, and ideas. Interestingly, the Bush Administration also advocated on behalf of community colleges, although they moved funding streams in a different direction. Whereas the Obama Administration is focusing on expanding and strengthening community

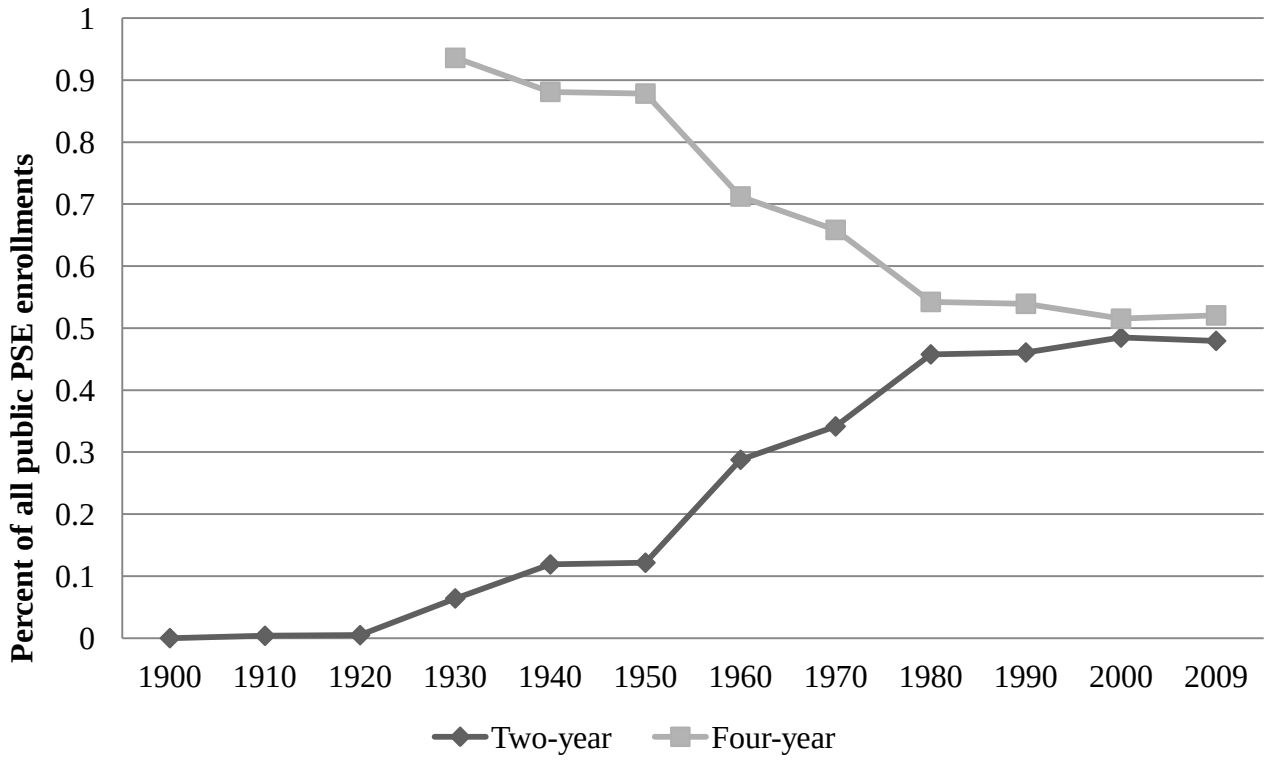
colleges through funding to students and the institutions themselves, the Bush administration allocated money to community colleges largely through job training grants to the business community. Additionally, many economists predict yet another wave of economic restructuring (see, for example, the work of Alan Blinder, an economist at Princeton University). To what extent have other macro influences such as governmental policy and macroeconomic forces contributed to the expansion of community colleges compared to growth brought on by the world society value system? Additionally, while Schofer and Meyer (2005) answer this question for education broadly speaking, the answer for community colleges specifically is less clear since they have not been a focus in the sociological literature.

Figure 2.1. Number of Two- and Four-Year Institutions over the 20th Century.



Sources: Cohen and Brawer (Cohen 2003 Table 1.1); Digest of Education Statistics, 2011 (Snyder and Dillow 2011 Table 279); Statistical Abstract of the United States (U.S. Census Bureau various volumes).

Figure 2.2. Today's College Students: Higher Education Enrollments as a Proportion of Public Postsecondary Education.



Sources: Digest of Education Statistics, 2011 (Snyder and Dillow 2011 Table 199); Statistical Abstract of the United States (U.S. Census Bureau various volumes).

Table 2.1. Summary of Number of States with Changes in Policies, Agreements, or Transfer Mechanisms Since 2001

Year	Statewide Policy	Cooperative Agreements	Transfer Data Reporting	Incentives/ Rewards	Statewide Articulation Guide	Common Core	Common Course Numbering
2001	30	40	33	18	26	23	8
2010	36	46	37	22	35	34	18
Change[(a)]	+6	+6	+4	+4	+9	+11	+10

Note: (a) Changes in statewide policy may be reflected in the common core and common course numbering columns, instead of in the statewide policy column.

Source: Smith (2010).

Chapter 3

Data and Methodology

This chapter uses lessons learned about the macro-structural context influencing community colleges as institutions in Chapter 2 to better understand how changes in the environment play out at the individual level for a cohort of contemporary youth. Specifically, drawing from the traditional theories reviewed and new ideas introduced in earlier chapters, this chapter (together with Chapter 4) addresses the central micro-level question posed in this dissertation. That is: How, if at all, do expectations change and what are the mechanisms at play for contemporary youth? While my macro-level study from Chapter 2 represents an empirical analysis of key institutional trends transforming the contemporary community college, my individual-level analyses in Chapters 3 and 4 examine how these changes intersect with how youth think about their educational futures over the transition to young adulthood and into their thirties. I open by detailing my specific analysis plan and operating hypotheses, before summarizing how this study extends current lines of inquiry. Next, I provide details the data and methods used in this study and close with a discussion of limitations.

3.1. Analytic Strategy and Hypotheses

This section introduces the analytic strategy for the results reported in Chapter 4. I employ graphic, descriptive, and inferential logistic analysis to examine the degree to which educational expectations change and persist over the transition to adulthood. Special attention is given to whether and how the two-year sector plays a role in any downward leveling of ambition that occurs among a contemporary cohort of youth. Figure 3.1 provides a graphic overview of my analysis plan by phases of adulthood. Fitting with Student Right-to-Know legislation which requires institutions to calculate completion and graduation rates based on full-time, degree-

seeking students entering an institution and completing their intended course of study within time and a half, I first analyze these competing explanations from respondents' senior year of high school until they are six years out of high school. Then, for those youth (now young adults) who have not earned at least a bachelor's degree by age 24, I extend my analysis to examine the same competing explanations, only over the period of late adulthood which is captured in two ways in this study. The first, late adulthood I, follows Johnson and Reynolds (2013) and looks at how institutional, family, and academic factors influence the change and persistence in bachelor's degree trajectories over the six years following early adulthood. Late adulthood II takes an even stronger life course perspective and, again only for those who have not yet earned their bachelor's degree in the normatively-prescribed manner, examines these questions over the entire transition to adulthood from when youth are seniors in high school until they are roughly 31 years of age, on average.

Figure 3.1 also shows the year, age of respondents, and number of years since high school represented by each wave of data collection, as well as the range of waves included in early adulthood, late adulthood I, and late adulthood II. The years of this data collection – 1991 through 2004 - become very significant given the prolonged and increasingly blurry transition to adulthood for contemporary youth, one lacking the once predictable transitions from high school into the world of work (or perhaps higher education for some), marriage, and family formation (Mortimer et al. 2008; Rindfuss et al. 1987; Shanahan 2000). Finally, Figure 3.1 captures the range of ages represented at each wave of data collection, although for clarity and ease of interpretation, I use only the upper end of the age distribution when reporting results (e.g. by age 24 instead of by ages 23-24).

The cooling out hypothesis, diversionary theory, and the more recently developed college-for-all ethos all predict a downward leveling of educational expectations for those who attend the community college. Though the authors of these explanations disagree on the causal mechanism involved in how individuals come to accept lower expectations for their educational futures, they agree that attending a community college will bring about this shift, particularly for socioeconomically and academically disadvantaged students. I came to the scholarly study of community colleges and their students after several years working as an institutional researcher and part-time adjunct instructor at a large community college in the northeast. My experience working with data on community college students from my home institution and from institutions across the state where I worked suggest a few alternative hypotheses:

> *(1) Cooling out is not limited to community colleges and, at least for some students, the two-year sector acts in the opposite direction assumed in these theories. That is, controlling for family socioeconomic and individual academic resources, as well as other demographic and life course variables in these models, attending a community college versus not attending any postsecondary education will result in a warming up of educational expectations.*
>
> *(2) Limiting our study of bachelor's degree expectations to the traditional marker of four- to six-years from high school is not sufficient for understanding the intersection of educational expectations, institutional sorting, socioeconomic status, and academic factors in the lives of contemporary cohorts of youth. That is, looking at the change in postsecondary educational expectations over a decade out of high school (versus the normatively understood six years, will reduce the proportion of cooling out observed in a cohort of contemporary youth.*

(3) And, finally, the two dominant classifications for postsecondary institutional attendance in sociological and educational research (current institution attended and highest institution attended) miss a new category of students who attend two- and four-year institutions in a wide array of patterns (i.e., inter-institutional attenders). Specifically, I predict that attending two- and four-year institutions, i.e., inter-institutional attendance, will have a positive and statistically-significant effect on the likelihood of warming up versus cooling out, and that this will be stronger when longer portions of the life course are assessed.

3.2. Connections and Extensions to Existing Research

In addition to identifying the key institutional trends at the heart of the current condition of the two-year sector (see Chapter 2); this dissertation extends the current literature on how different postsecondary institutional forms intersect with change and persistence in educational expectations beyond high school in three key ways.

First, I avoid the classic selection error in research on community college students of making a priori selections based on levels of expectations or levels of achievement in high school and thereby limiting the range of comparisons allowed (Alexander et al. 2008; Long and Kurlaender 2009; Stephan et al. 2009). Instead, I include an entire cohort of contemporary youth, allowing comparisons beyond the downward leveling of ambition predicted by Clark (1960), Brint and Karabel (1989b), Rosenbaum (2001), and those who followed them. I also include the possibility of an upward leveling of educational ambition or "warming up," more reflective of Turner's (1960)contest mobility system predictions, as well as measure of the maintenance of educational expectations, be they at the low end of not expecting any bachelor's degree ("steady low") or the more modally experienced high end of expecting at least a bachelor's degree

("steady high") (see Deil-Amen 2006 for more on warming up; and Johnson and Reynolds 2013 for more on steady low and steady high categorizations).

Second, I distinguish between three periods of change and persistence in educational expectations in the near decade and a half following high school: the commonly understood period of early adulthood and two varieties of late adulthood, a period of the life course which a growing body of research suggests matters in terms of educational expectations and attainment for a growing proportion of contemporary youth, particularly nontraditional students (Alexander et al. 2008; Andres et al. 2007; Attewell and Lavin 2007; Bozick and DeLuca 2005; Johnson and Reynolds 2013). As noted by Alexander et al. (2008) in their study of a panel of Baltimore youths from the end of high school to ages 22 and 28, the ability to look at changes in educational expectations over a decade out of high school marks a significant improvement to earlier research which was limited to looking at changes over a shorter period of time. The longer period of time covered in this study accounts for both the changing nature of the transition to adulthood in modern society and the growing presence of various forms of education, including non-traditional modes such as online learning, workforce development training, and even two-year colleges, over the life course (Bills 2004). Indeed, much like the transition to adulthood, the "end" mark of educational attainment is increasingly blurry and intertwined with decisions about schooling, work, and family roles (Mortimer et al. 2008; Rindfuss et al. 1987; Shanahan 2000).

Finally, I introduce a new analytic concept for understanding a growing but understudied group of contemporary college students: "inter-institutional attenders" or those attending two- *and* four-year institutions to varying degrees over their transition to adulthood. I discuss each of these contributions and their connection to existing research in turn below.

3.2.1. Bachelor's Degree Expectation Trajectories: Cooling Out, Warming Up, or Holding Steady?

As shown in Figure 3.2, the majority of YDS youth (about 60 percent) expected to earn at least a bachelor's degree when they were seniors in high school. Another 29 percent expected to engage in postsecondary education at some level, be it in a government-sponsored training program, technical college, through an associate degree, or by attending some college but not earning a bachelor's degree. The remaining 11 percent of YDS youth did not expect to engage in any postsecondary education.

Given this starting point and drawing from existing research on postsecondary education expectation persistence and change, we would expect somewhere between 12 and 28 percent of youth to have dropped their bachelor's degree expectations or to have cooled out by the time they were in their early- to mid- twenties and somewhere between 12 and 44 percent when extending the longitudinal frame to consider the persistence and change in expectations by the late-twenties and early-thirties (Alexander et al. 2008; Johnson and Reynolds 2013). Figure 3.3 shows the proportion of bachelor's degree trajectories in early adulthood. While roughly equal proportions of youth had cooled out and warmed up (13 and 11 percent, respectively), the modal experience through early adulthood was one of maintaining expectations (76 percent total). Specifically, fifty-two (52) percent held steady high expectations (i.e., at each wave of data collected over early adulthood they reported expecting to earn at least a bachelor's degree or higher), while roughly one in four (24 percent) reported steady low expectations (i.e., they consistently reported expectations to earn less than a bachelor's degree).

3.2.2. Educational Expectations in Late Adulthood

Though it varies some depending on how late adulthood is captured (see Figure 3.1), the general shift when we expand our longitudinal frame in considering the distribution of education trajectories among a contemporary cohort of youth is that of a decrease in the proportion of youth who with steady low educational expectations and an increase in the proportion of warming up. This is shown most clearly by comparing the early adulthood trajectories to the late adulthood II trajectories in Figure 3.4. While the bachelor's degree expectations of youth had cooled out in roughly the same proportion over a decade after high school, the proportion of youth experiencing an overall warming up of bachelor's expectations increased 14 percentage points to roughly a quarter of the cohort over this time.

Given what we know about the strong, positive correlation between educational expectations and eventual completion (Bozick et al. 2010), an ancillary question is what these trajectories look like when we account for the completion of a bachelor's degree in early adulthood. That is, what do bachelor's degree trajectories look like for those individuals for whom expectations still matter? Figure 3.5 answers this by looking at bachelor's degree trajectories among those youth who had not yet earned a bachelor's degree by age 24 (six years after their senior year of high school). As expected, and again depending somewhat on how late adulthood is captured, the proportion of youth holding steady high expectations through late adulthood drops notably. Interestingly though, anywhere from 24 to 32 percent of youth who had not yet earned a bachelor's degree within six years of their senior year of high school, the de facto end point in the majority of data on postsecondary completions (Bailey 2012), continued to hold on to these aspirations as long as 13 years after their senior year. What's more, another 23 to 35 percent had experienced a warming up of educational expectations over their prolonged

transition to adulthood. Put another way, regardless of how late adulthood is captured, the majority of youth not completing a bachelor's degree by traditional markers of completion continued to fall into trajectories suggesting a personal optimism about their likelihood of earning a bachelor's degree at some point in the future.

3.2.3. Inter-Institutional Attenders

How do traditionally-aged students intersect with community colleges today? Do they attend community colleges for two- to four-years before transferring to a four-year college or university? Do they go to community colleges with the intent of completing a terminal occupational degree or certificate before entering the labor market or perhaps while working? Do they attend community colleges as a convenience to complete four-year degree programs or certificates when home between semesters from their home four-year college or university? Do they attend community colleges for pre-college coursework or general exploration? In short, the answer is "all of the above" and more. Yet, until recently, much academic research on community colleges and the students they serve has ignored the varied purposes and missions of community colleges and instead focused on community college graduation rates. Such calculations have historically been based on the proportion of first-time, full-time, degree-seeking students who graduate within three or four years of enrolling in the community college (as mandated in the original Student Right to Know and Campus Security Act of 1990). Given the breadth of mandates indicated above, this places a disproportionate focus on one piece of the community college mission.

Indeed, this has been an historical critique of much existing research and measures of community college success and behind recent moves by the Committee on Measures of Student Success to expand this calculation to include students who attend part-time and those who

transfer in from other colleges, populations traditionally excluded from graduate rate calculations (Bailey 2012). Such changes come amidst growing evidence of multi-institutional attendance in more recent cohorts of youth (Adelman 1999, 2004, 2005, 2006; McCormick 2003). In over 200 pages of detailed analysis of a nationally representative cohort of students moving from high school into postsecondary education, Adelman (2006) explores what aspects of their formal schooling contribute to the completion of at least a bachelor's degree by their mid-20s. A repeating chorus throughout his analytic essay is the distinction between formal transfer from a two- to a four-year college (or even from one four-year to another) compared to the growing phenomenon of multi-institutional attendance, described as attending various institutions, (sometimes across traditional two- and four-year categories without any discernible plan or pattern) in a way that proves deleterious for completion, at least as traditionally measured. What is far less, understood, however, is the extent to which this multi-institutional attendance is happening both within and between the two- and four-year sectors, particularly within more contemporary cohorts of youth. The detailed longitudinal nature of the YDS data allows me to follow students from their senior year of high school in 1991 until they are over a decade out of high school. As such, these data present a fuller picture of students' postsecondary attendance over the prolonged transition to adulthood.

Figure 3.6 shows the proportion of YDS students by highest postsecondary institution attended over eleven waves of data collection from the time students are one year out of high school until they are in their thirties. Importantly, it shows this based on the traditionally-used categories of "highest" institution attended. This measure fails to capture the transfer mission of community colleges. From this view, four-year institutions appear the clear winner in terms of proportion of postsecondary enrollment initially and, especially, over the long term. As YDS

participants transition from high school into college and the world of work in the early 1990s, roughly 27 percent attend two-year institutions, with the remaining students fairly evenly split between not attending any postsecondary education (36 percent) and attending a four-year institution (37 percent). By 2004, however, there has been a sizable shift from no postsecondary attendance (only 11 percent) and four-year institution as the type of institution attended (58 percent), while the two-year attending group remains fairly stable at about 31 percent of the total cohort. Put another way, the percentage point gap between attending two- versus four-year institutions grows from about 9 points in 1992 to about 27 points by 2004, a 191 percent increase.

What do these proportions look like when we introduce those students attending two- *and* four-year institutions over this transition into a new categorization of students called inter-institutional attenders? Figure 3.7 shows a new story, one that paints a different picture of the role of community colleges in the lives of contemporary youth. The proportion of inter-institutional attenders grows from less than 5 percent of the cohort in 1992 to nearly 30 percent in 2004. Meanwhile, the proportion of students attending only two- or four-year institutions stays fairly steady at roughly 25 to 35 percent of the population in any given year. Further, we see the proportion of inter-institutional attenders increases by roughly 10 percentage points from just 19 percent of the population in 1998 (the year used to mark the traditionally defined 4-6 years of high school followed in most postsecondary education research) to just under 30 percent in 2004 when respondents were in their early 30s. In fact, by 2004, the proportion of students attending only two-year (31 percent), only four-year (28 percent), or both two- and four-year (29 percent) institutions over the transition to adulthood had reached near parity, with those not attending any postsecondary education lagging behind at just 11 percent of the population.

The different pictures painted by Figures 3.6 and 3.7 suggest that existing categorizations favor the dominant four-year ideology and, in so doing, understate the scope of the two-year sector with respect to the four-year sector.

3.3. Methods

In this section, I review the data and sample used in this study, as well as the specific variables and models used in Chapter 4.

3.3.1. Data and Sample

I use data from the ongoing Youth Development Study (YDS) to answer the three main micro-level and methodological questions posed in Chapters 3 and 4. Based in St. Paul, Minnesota and designed by University of Minnesota Sociologist Jeylan Mortimer and her colleagues, the YDS has followed a cohort of young people for over a decade and continues to follow a second-generation of youth. A random sample of ninth graders in the St. Paul public school district were initially selected to participate and were provided with small monetary and other incentives to enhance retention following high school (N = 1,010). These efforts have been successful. As of 2004, the final wave of data included in this study, the response rate was still in the seventies (73.4 percent) (see Mortimer 2003 for more on the survey and related research). Data for this study were obtained through The Pennsylvania State University's membership to the Inter-university Consortium for Political and Social Research.

Some notable advantages of using the YDS data to study the questions posed here include 1) the ability to track youth over a longer portion of the transition to adulthood than any existing national longitudinal studies focused on the intersection of education and the labor market, 2) the inclusion of rich measures of the intersection of education and labor market over the transition to adulthood, and 3) the study's low rate of attrition. These data are local in nature, which makes

them ideal for informing one state's policies, while also presenting a potential model for other states as statewide data systems continuously improve. Further, as mentioned in the introduction, given the stronger position of technical two-year colleges within Minnesota's statewide higher-education system relative to that of other states, it serves as a conservative test for the ideas explored here (Shaffer 2008).

While there are data available on other traditional-age cohorts of youth which focus on the linkages between education and the labor market – most notably, data on an early cohort of City University of New York (CUNY) students and the Baltimore Beginning School Study (BSS) (Attewell and Lavin 2007; Entwisle, Alexander, and Olson 1997) – neither are ideal for answering these questions. Both are drawn from urban areas which are less representative of the nation as a whole. Further, the CUNY data began following youth in the 1970s, when the transition to adulthood was more predictable and the distinctions between the two- and four-year sectors clearer. And although the BSS follows a more contemporary cohort of youth, these data are more representative of minority and economically disadvantaged urban youth. Some new research based on data from the national Monitoring the Future study in the United States and the Paths on Life's Way Project of British Columbia, Canada is starting to round out the national and international-comparative picture, but the YDS remain ideal for rounding out the longitudinal picture in the United States (Andres et al. 2007; Johnson and Reynolds 2013).

Specifically, the YDS data follow youth over 18 waves of data collection from their freshman year of high school in 1988 when the youth are 14 or 15 years old through to 2009 when the "youth" (now young adults) are in their mid-30s and out of high school for nearly a decade and a half. Although data are available through 2009, I limit my sample to only those waves for which the full data are publically-available (i.e., through 2004 when respondents were

31 years old and out of school for about 13 years on average). The most comparable longitudinal educational study using national-level data is the National Educational Longitudinal Study of 1988, which stops following students when they are roughly 7-8 years out of high school. Previous research, even for cohorts of youth with more predictable transitions, has shown that taking a longer range perspective changes the completions picture, especially for more nontraditional students. For example, when followed for about 30 years, 71 percent of the CUNY cohort ultimately got a degree, with more than three-fourths of these degrees being at least a baccalaureate degree. Importantly for building the case for taking a more longitudinal perspective, we see that it took about 29 percent of these degree earners 10 or more years from their first entry to earn their degree and another 10 percent took 20 or more years to do so (Attewell and Lavin 2007). In addition to providing a more longitudinal frame, the inclusion of rich measures of the intersection of education and labor market over the transition to adulthood represents another key contribution, to account for inter-institutional attendance. Finally, the YDS data have enjoyed high response rates over time as shown above.

My analysis includes the entire cohort, including high school dropouts, who make up 19 percent of the panel in 1992, when respondents were one year out of high school. Of the 130 high school dropouts reported in 1992, about a quarter (32) had earned their GED in the year since they were expected to graduate from high school. While these youth aren't as likely as high school completers to have postsecondary plans, both the realization of noncredit-to-credit pathways for disadvantaged youth and the growing "college-for-all" ethos among contemporary youth make what these youth think about their educational prospects important (Grubb et al. 2003; Levin 2007; Rosenbaum 2001).

3.3.2. Variables and Models

I estimate the following general multinomial logit model for the three distinct periods of adulthood studied here (i.e., in early adulthood, late adulthood I, and late adulthood II). This allows me to examine the varying impact of postsecondary institutional attendance (INST), family socioeconomic background (FAM), and academic factors in high school (ACAD) on youths' bachelor's degree expectation trajectories. Given there is not a specific distance between cooling out (CO), warming up (WU), steady low (SL), and steady high (SH), I am confident my dependent variable is unordered and the multinomial logit is appropriate. I also control for various demographic (DEM) and life course (LC) events, all of which are defined in greater detail below.

Multinomial Logit Model:

$$\ln \Omega_{CO|P}(x_i) = \beta_{0,\,CO|P} + \beta_{1,\,CO|P}\text{INST} + \beta_{2,\,CO|P}\text{FAM} + \beta_{3,\,CO|P}\text{ACAD} + \beta_{4,\,CO|P}\text{DEM} + \beta_{5,\,CO|P}\text{LC} + \varepsilon$$

$$\ln \Omega_{WU|P}(x_i) = \beta_{0,\,WU|P} + \beta_{1,\,WU|P}\text{INST} + \beta_{2,\,WU|P}\text{FAM} + \beta_{3,\,WU|P}\text{ACAD} + \beta_{4,\,WU|P}\text{DEM} + \beta_{5,\,WU|P}\text{LC} + \varepsilon$$

$$\ln \Omega_{SL|P}(x_i) = \beta_{0,\,SL|P} + \beta_{1,\,SL|P}\text{INST} + \beta_{2,\,SL|P}\text{FAM} + \beta_{3,\,SL|P}\text{ACAD} + \beta_{4,\,SL|P}\text{DEM} + \beta_{5,\,SL|P}\text{LC} + \varepsilon$$

$$\ln \Omega_{SH|P}(x_i) = \beta_{0,\,SH|P} + \beta_{1,\,SH|P}\text{INST} + \beta_{2,\,SH|P}\text{FAM} + \beta_{3,\,SH|P}\text{ACAD} + \beta_{4,\,SH|P}\text{DEM} + \beta_{5,\,SH|P}\text{LC} + \varepsilon$$

Dependent Variables. Table 3.1 summarizes operationalizations of variables used in this analysis. As detailed above, three separate dependent variables are estimated to capture bachelor's degree expectations in early adulthood (1991-1997), late adulthood I (1997-2004), and late adulthood II (1991-2004). Both late adulthood variables are limited to those who had not yet earned a four-year by the end of early adulthood. Though capturing the change and persistence of bachelor's degree expectations over different points in time, the same definitions are applied: (1) cooled out (CO) for those respondents who expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently report not expecting to earn at

least a bachelor's degree and hold on to these lower expectations; (2) warmed up (WU) for those respondents who do not expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently reported expecting to earn at least a bachelor's degree and then hold these higher expectations or continue to oscillate between whether or not they expected to earn a bachelor's degree; (3) steady low (SL) for those respondents who never report expecting to earn at least a bachelor's degree; and (4) steady high (SH) for those respondents who only ever report expecting to earn at least a bachelor's degree. I required non-missing codes in at least half of the relevant follow-ups for a case to be successfully classified.

Independent Variables. The key independent variable of interest is postsecondary educational attendance, conceptualized in three ways for this study: *current institutional attendance, highest postsecondary institution attended,* and *inter-institutional attendance.* As shown above, a variety of research shows that students are not only attending multiple postsecondary institutions simultaneously and over time, but they are also attending different types of institutions. Yet, the modal forms for capturing institutional attendance in research today are current institution attended or highest postsecondary institution attended (see Alexander et al. 2008 and Johnson and Reynolds 2013 for recent examples of each). Particularly when looking at the intersection of educational expectations and institutional attendance, these operationalizations ignore the churning within and between the two- and four-year sectors. *Inter-institutional attendance*, meanwhile, includes the following categories: 1) no postsecondary education; 2) two-year institution only; 3) four-year institutional attendance only; and 4) two- and four-year institutions (or inter-institutional attendance).

Family socioeconomic status (FAM) is drawn from a parent survey during student's senior year of high school. Specifically, I use a measure of *mother's highest level of education*

categorized into the following groups: 1) high school only; 2) some college, no bachelor's degree; 3) at least a four-year degree . I tried other variations of this construct, including options which parceled out mother's with two-year degrees. However, this left categories with insufficient ends given the small sample size over all. Additionally, research has shown that a bachelor's degree is a defining economic variable particularly for women in this age group (Carnevale et al. 2011).

Academic factors (ACAD) include measures of high school grade point average (GPA), and tracking, both of which have been shown to have a significant impact on college completion (Adelman 2006). Specifically, *high school GPA* is measured by student's self-reported GPA in their senior year of high school on a 9 point scale (A, A-, B+, B, B-, C+, C, C-, and D/F) and reverse coded to facilitate ease of interpretation in inferential models. Thirteen (13) students circled more than one grade category and were therefore set to missing. *Curricular track* is a dichotomous measure distinguishing between: 1) reports being in a college preparatory curriculum in high school and 0) not in a college preparatory curriculum in high school.

Demographic variables (DEM) include race and gender, measured in the following ways. *Race* is measured as a dichotomous variable: 0) nonwhite; 1) white, where white includes only non-Hispanic, white youth. *Gender* is also a dichotomous variable: 0) male; 1) female.

Measures of life course transitions (LC) include the traditionally used marriage/cohabitation and passing into the parenthood life stage. In all cases these are captured at two different points in time (six- and thirteen- years out of high school) in an effort to better understand the longitudinal implications of life course transitions on bachelor's degree completion. With the exception of whether or not someone was married, these questions were asked consistently over time. In 1998 respondents were asked the following question about their

marital status: “Are you presently married?” and given a dichotomous option of “yes” or “no” in response. By 2004, however, this question was changed to ask whether respondents were “married/cohabiting”, with the same “yes” or “no” response categories. As such, there is no way to disentangle married versus cohabiting responses in the later wave. Therefore, my *marriage*/*cohabitating* variables have been recoded into two separate dichotomous measures in this study capturing whether respondents are “married” (coded to 0 if no and 1 if yes) in 1998 or “married or cohabiting” (similarly coded 0 if no and 1 if yes) in 2004. To determine whether respondents are *parents*, I draw from the following question asked in 1998 and 2004: “Do you have any children?.” In both years, I use a dichotomous variable: 0) Not a parent; 1) Parent.

3.3.3. Non-Response and Attrition

There are two primary sources of missing responses in the YDS data: item non-response and attrition from the panel. I address item non-response by taking advantage of the longitudinal nature of the YDS data in variable construction of educational trajectories and through listwise deletion in my inferential models. The largest source of missing data is due to attrition from the panel. Logistic regression analyses of the odds of attrition in the YDS data indicate that the attrition that has occurred is not completely missing at random (Mortimer 2003). Specifically, survey retention has varied along gender, race, and family stability lines. For example, males were less likely retained than females, as were nonwhites relative to whites. Additionally youth in households where no family members worked the year prior to the start of the study were more at-risk of survey attrition than those youth in families with at least one working family member. While I attempted multiple imputation to deal with attrition, this proved problematic due to added “noise” to the slope estimates from my y-values (Von Hippel 2007), the fact that the data are not completely missing at random, and, given the size of the imputed model, there

was evidence my results were being driven in large part by my imputation model rather than the observed data. The sample size for early adulthood is 476, for late adulthood I, in which I also restrict the analysis to those who had not earned a college degree within six years of their senior year, the sample size is 298, and for late adulthood II, similarly restricted, the sample size is 294. Particularly in late adulthood, these small sample sizes result in a loss of power for determining significance. However, as shown in Chapter 4, they are still sufficiently large to show key relationships and, of course, direction. As such, this approach serves as a conservative approach for the ideas tested here. While more research with larger, nationally-representative panels, such as the forthcoming Educational Longitudinal Study is certainly advisable, it is unlikely that data with the degree of longitudinal scope of the YDS will be available for some time.

3.4. Limitations

There are three key limitations of the data and methods as employed here. While I have foreshadowed these in previous sections, I am including a summary of them here. I also return to each of these in Chapter 5, with ideas on how these might be addressed in future research.

First, the YDS data are local data and not nationally-representative. The disadvantages to using local data are well known and obvious in most areas of research within the sociology of education. Local data can be skewed by unique patterns, people, and places, thereby picking up on local effects which may or may not be replicable elsewhere. The utility of using local data is a little less clear when we take particular interest in what's happening to students as they pass through the two-year sector. Why? In short, there is far more heterogeneity within the structure and form of state-level two-year systems than there is in four-year systems of higher education. Community colleges remain inherently local organizations relative to their four-year peers, even as macro-structural forces create more homogenization in their form and structure (Meyer et al.

2007; W. Norton Grubb 1985). In Minnesota, community and technical colleges are part of the larger Minnesota State Colleges and Universities system. There are 32 institutions overall, 7 of which are state universities, 5 community colleges, 5 technical colleges, and 15 combined technical and community colleges, making it the fifth-largest system of two- and four-year colleges and universities in the country, based on student enrollment (MNSCU 2010). How, though does the system compare to other states in terms of its two-year sector? The Rockefeller Institute of Government shows that Minnesota's community college system ranks 21 in terms of the share of all higher education enrollments in the state, 16th in the share of their total population ages 18 and over, 11th in the share of the full-time equivalent registration, and 34th and 36th respectively in terms of the five-year growth rate in public two-year enrollments and these enrollments compared to public four-year FTE enrollments. Interestingly, they ranked 2nd in the average tuition and fees for public two-year colleges in 1006-07 at $4,359, fifty-nine (59) percent of the cost at four-year years (Shaffer 2008). With costs so comparable to the state's four-year sector, we might expect Minnesota to rank higher in terms of share of enrollments. Yet, Shaffer (2008) finds only a week correlation (0.342) between tuition and enrollment, further highlighting the reality of myriad other factors involved in the extent to which students enroll in their local community college. It is important to remember that the results presented here can tell us something about this sample of contemporary youth which may or may not translate to other local contexts. That said, as mentioned earlier, the study serves as a nice compliment to other studies using local data to look at students postsecondary educational expectation trajectories until better national-level data are available.

Secondly, the relatively small size of the samples employed here does not allow me to disentangle the heterogeneity within expectation trajectories, as well as within institutional

attendance variables. The two trajectories with the most within-group variation are the warming up and steady high trajectories. For example, while the majority of students within the warming up trajectory essentially "hold steady" after making their initial move from not expecting at least a bachelor's degree to expecting at least a bachelor's degree, twenty-two (22) percent of the early adulthood group and roughly 30 percent of the late adulthood groups continued to oscillate back and forth between not expecting and expecting at least a bachelor's degree. Are there different mechanisms at play for those youth holding relatively more "unstable" versions of warming up than others? Further, even with the more "stable" youth in the warming up trajectory, there was movement beyond the expectation of earning a bachelor's degree to various post-baccalaureate degrees. Similarly, even within the seemingly more homogenous steady high trajectory, there is similar creep of expectations to higher and higher levels. What are the mechanisms at play and implications of increasingly higher educational expectations? While beyond the scope of this study to fully address, these are interesting questions, particularly in light of new evidence from the Survey of Earned Doctorates that around 20 percent of new PhDs attended a two-year college at some point along their educational trajectory (Vitullo 2012). Further, there is some evidence of a curvilinear effect of the role of family background on educational attainment, whereby (depending on how it is measured), family background matters a lot in terms of high school degree attainment and in terms of advanced degree attainment, but less so in baccalaureate attainment (Hout 1988; Torche 2011). Although, Torche (2011) predicts the role of family background will weaken over time as the proportion of advanced degree holders expands and represents more saturation. The role of the two-year sector in all of this has generally been ignored by stratification and mobility scholars.

Finally, while not in all cases, some models show significance in the constant term, suggesting the possibility of omitted variable bias and/or missing control variables. More research is needed to make sure all factors are considered. Two areas of interest are better understanding the role of selectivity in trajectory placemen, as well as the role of enrollment intensity. Long and Kurleander (2009) find a community college baccalaureate gap of around 14.5 percent using census, administrative data from the state of Ohio and following student for about six years from high school completion. They also find a similar gap when making comparisons between four-year institutions of varying selectivity. It is possible that there is little difference in the impact of two-year and less-selective four-year institutions on students' educational expectations over the transition to adulthood. At the same time, there are likely large differences between attending two- and four-year institutions at the extremes (i.e., not attending any postsecondary education or a short-term training via a community college attending highly-selective institutions). However, given the theoretical questions tested here, the more interesting story sociologically is in the convergence of institutional forms in the middle. This "missing middle" – i.e., the large swath of colleges and universities with moderate to low selectivity in between community colleges and so-called "Golden Dozen" – represents an understudied and under theorized group within the postsecondary landscape (Gumport 2007). By obtaining restricted-access to YDS institutional attendance codes and merging the YDS data with the primary sectors identified in the Integrated Postsecondary Education Data System (IPEDS), I attempted to create a rudimentary measure of selectivity. This did not prove useful in the case due to the challenge of small sample size, but is worth of continued investigation.

With respect to enrollment intensity, descriptive analysis of the high school classes of 1972, 1982, and 1992 and more careful analysis of the institution-going patterns of traditional-

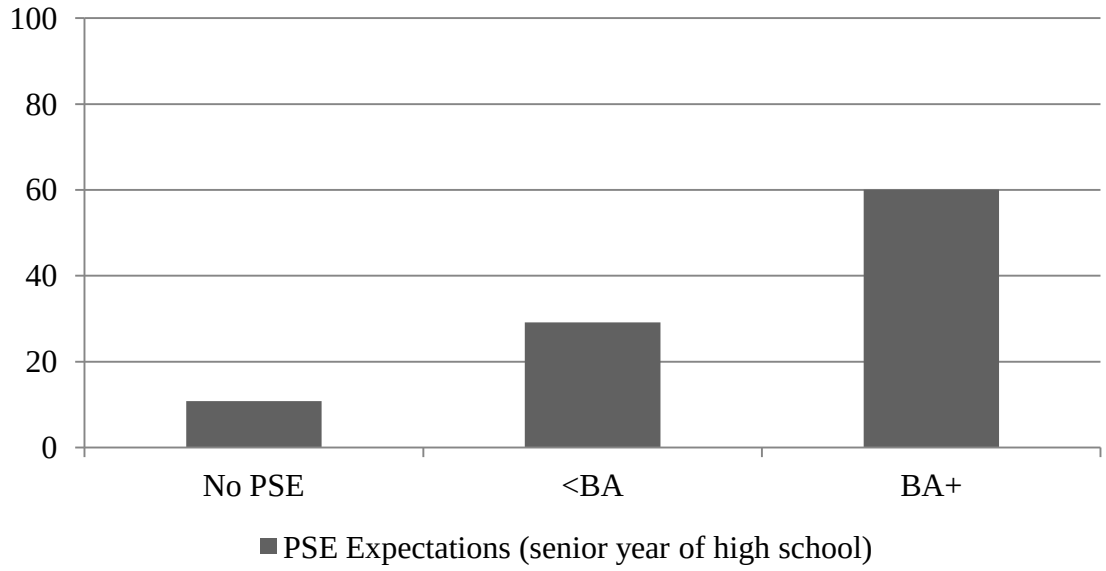
age college students suggest that enrollment intensity matters a great deal to today's youth (Adelman 2004, 2006; Goldrick-Rab 2006; Goldrick-Rab and Pfeffer 2009; McCormick 2003). Alexander et al. (2008) used the following mutually exclusive categories to capture enrollment intensity and find that enrollment intensity matters a great deal to the maintenance of bachelor's degree expectations: (1) no enrollment; (2) two-year school, low intensity; (3) two-year school, high intensity; (4) four-year school, low intensity; and (5) four-year school, high intensity. Low intensity was defined as enrollment for fewer than 3 three-month quarters for two-year attenders and fewer than 6 three-month quarters for four-year attenders. Similarly, high intensity was defined as enrollment for 3 or more quarters for two-year enrollment and 6 or more for four-year enrollment. Taken together, these studies increasingly suggest that it isn't *where* you go to college that matters, as much as it is *when* you go. Unfortunately, the YDS data do not allow me to replicate these measures exactly as detail on enrollment is limited to the previous year only. I did test the influence of year-to-year enrollment intensity – i.e., being in higher education at all – on completion and found it to have a strong, positive impact on baccalaureate attainment. However, given the inability of the best measure I could derive from the YDS data to distinguish between part- and full-time attendance within and between the two- and four-year sectors and the fact that adding it took away important degrees of freedom, I decided not to add it at this time. As above, more research with richer data is needed to full tease out the role of enrollment intensity patterns in the maintenance and change of bachelor's degree expectation trajectories.

Figure 3.1. Overview of Analysis Plan by Phases of Adulthood

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8	Wave 9	Wave 10	Wave 11	Wave 12
Year	1991	1992	1993	1994	1995	1997	1998	1999	2000	2002	2003	2004
Age	17-18	18-19	19-20	20-21	21-22	23-24	24-25	25-26	26-27	28-29	29-30	30-31
Yrs since high school	0	+1	+2	+3	+4	+6	+7	+8	+9	+11	+12	+13
Expectation Trajectories	**early adulthood** (senior year to 6 years after)						**late adulthood I** (7 to 13 years after)					
	late adulthood II (senior year to 13 years after)											

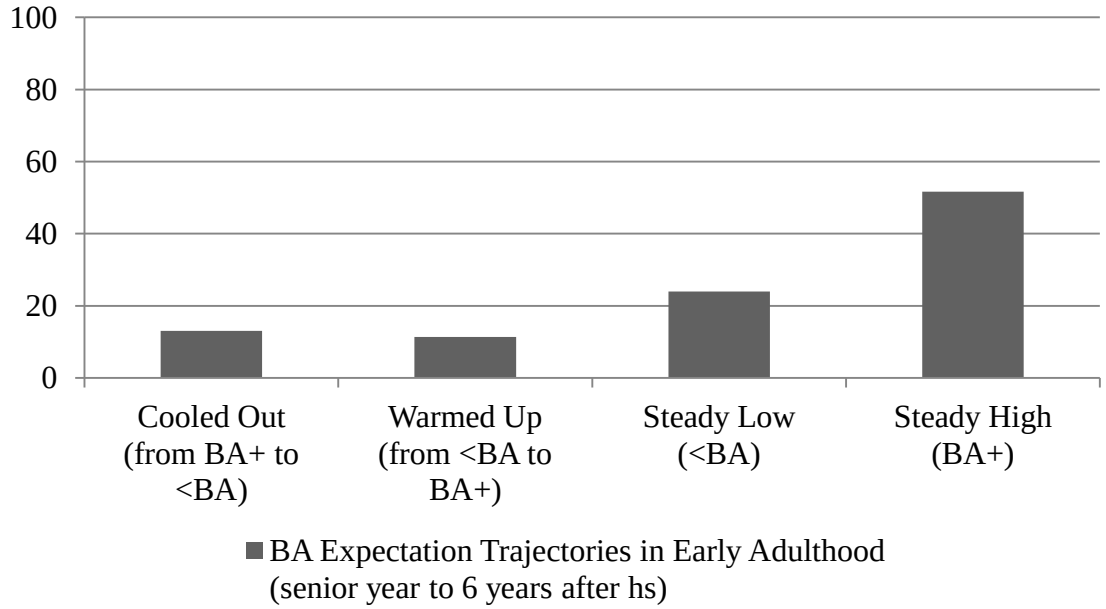
Note: Late adulthood I and II are limited to those who had not completed at least a bachelor's degree as of wave 7 (i.e., within six years of their senior year of high school).

Figure 3.2. Highest Postsecondary Education Expected among High School Seniors, 1991



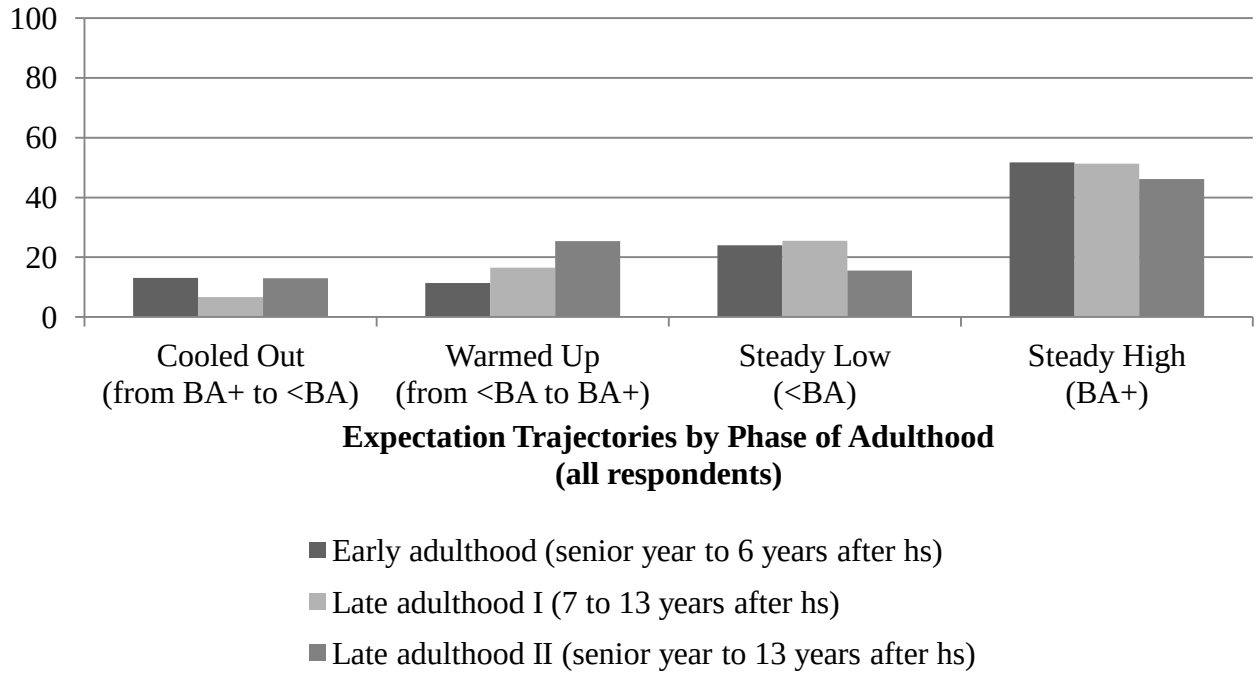
N = 476

Figure 3.3. Bachelor's Degree Expectation Trajectories in Early Adulthood, 1991-1997



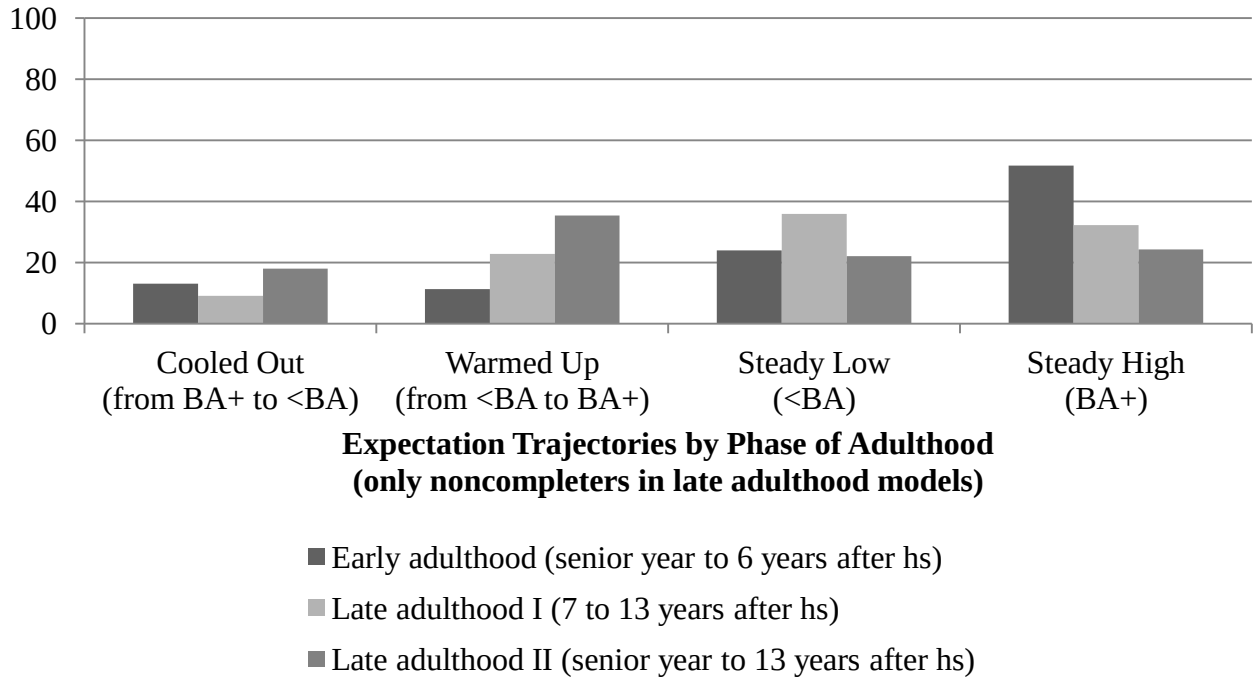
N = 476

Figure 3.4. Bachelor's Degree Expectation Trajectories of All Respondents by Phase of Adulthood, 1991-2004



N_{EA} = 476; N_{LAI} = 298; N_{LAII} = 294

Figure 3.5. Bachelor's Degree Expectation Trajectories of All Early Adulthood Respondents and Late Adulthood Noncompleters, 1991-2004



N_{EA} = 476; N_{LAI} = 298; N_{LAII} = 294

Note: Noncompleters in late adulthood include all respondents who had not yet earned at least a bachelor's degree within six years of their senior year of high school.

Figure 3.6. Proportion of Students by Highest Postsecondary Institution Attended from One to Thirteen Years out of High School, 1992-2004

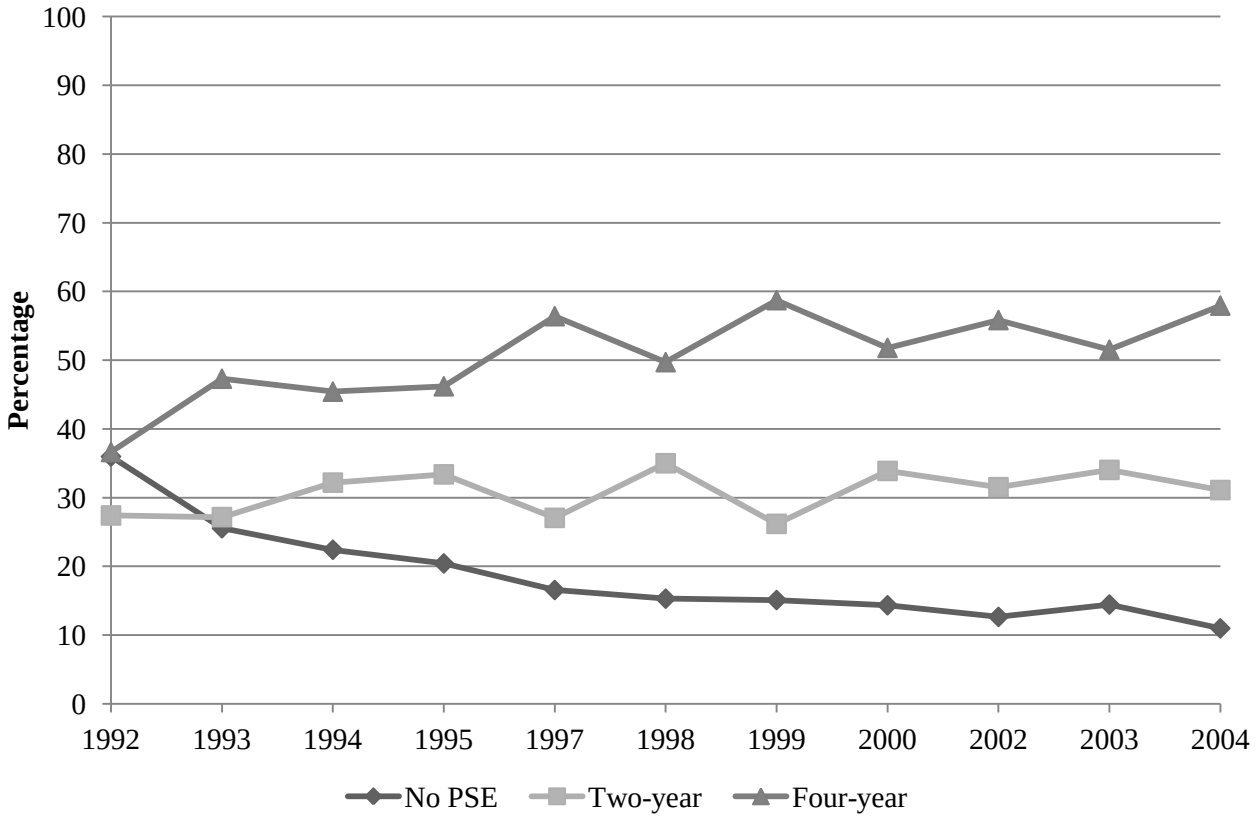


Figure 3.7. Proportion of Students by Inter-Institutional Categories of Postsecondary Attendance from One to Thirteen Years out of High School, 1992-2004

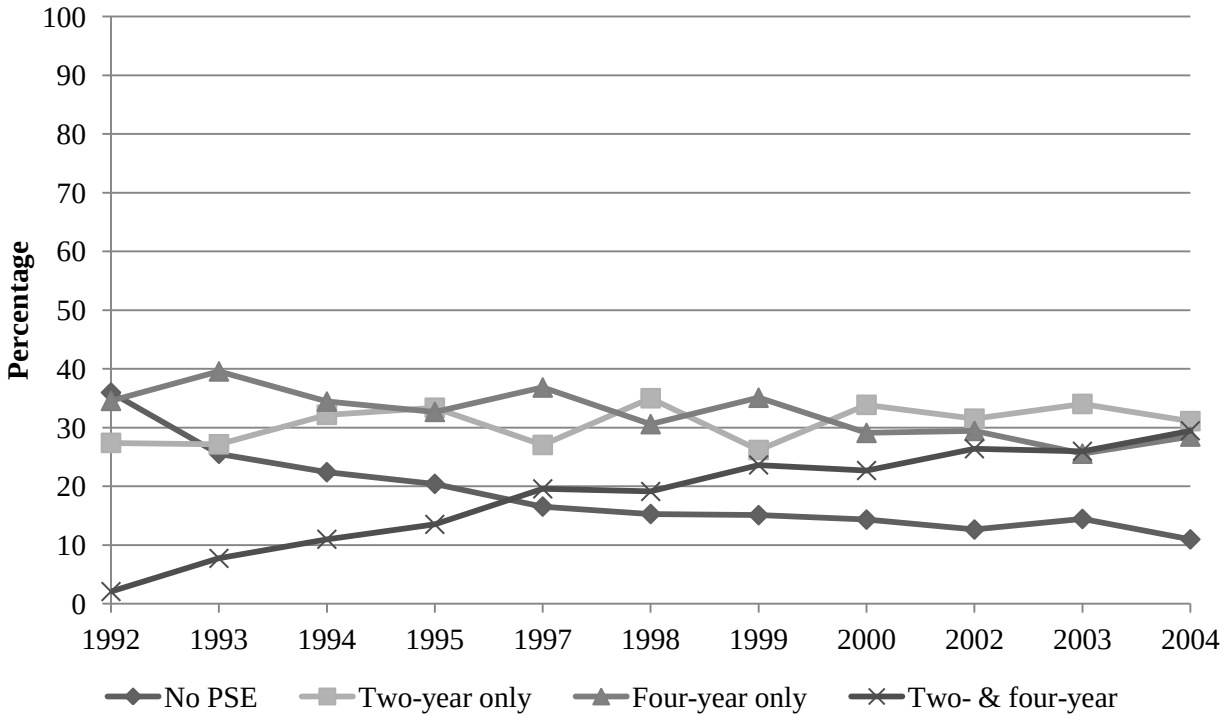


Table 3.1. Operationalization of Variables

Variable	Definition
Dependent Variables	
Bachelor's Degree Expectation Trajectories (in early adulthood)	Derived based on four categories of change and persistence in bachelor's degree expectations in the six years following high school (i.e., through age 24): (1) "Cooled Out" or those respondents who expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently report not expecting to earn at least a bachelor's degree and hold on to these lower expectations; (2) "Warmed Up" or those respondents who do not expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently reported expecting to earn at least a bachelor's degree and then hold these higher expectations or continue to oscillate between whether or not they expected to earn a bachelor's degree; (3) "Steady Low" or those respondents who never report expecting to earn at least a bachelor's degree; and (4) "Steady High" or those respondents who only ever report expecting to earn at least a bachelor's degree.
Bachelor's Degree Expectation Trajectories (in late adulthood I)	Derived based on four categories of change and persistence in bachelor's degree expectations in the non-normative college-going years (i.e., from about seven to thirteen years after high school or from age 25 to age 31): (1) "Cooled Out" or those respondents who expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently report not expecting to earn at least a bachelor's degree and hold on to these lower expectations; (2) "Warmed Up" or those respondents who do not expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently reported expecting to earn at least a bachelor's degree and then hold these higher expectations or continue to oscillate between whether or not they expected to earn a bachelor's degree; (3) "Steady Low" or those respondents who never report expecting to earn at least a bachelor's degree; and (4) "Steady High" or those

	respondents who only ever report expecting to earn at least a bachelor's degree.
Bachelor's Degree Expectation Trajectories (in late adulthood II)	Derived based on four categories of change and persistence in bachelor's degree expectations in the thirteen years following high school (i.e., through age 31): (1) "Cooled Out" or those respondents who expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently report not expecting to earn at least a bachelor's degree and hold on to these lower expectations; (2) "Warmed Up" or those respondents who do not expect to earn at least a bachelor's degree when they are seniors in high school, but subsequently reported expecting to earn at least a bachelor's degree and then hold these higher expectations or continue to oscillate between whether or not they expected to earn a bachelor's degree; (3) "Steady Low" or those respondents who never report expecting to earn at least a bachelor's degree; and (4) "Steady High" or those respondents who only ever report expecting to earn at least a bachelor's degree.
Postsecondary Education Attendance Variables	
Current Institutional Attendance	Based on postsecondary enrollment in wave 6 for early adulthood (when respondents are 24 years of age and six years from their senior year of high school) and postsecondary enrollment in wave 12 for late adulthood models (when respondents are 31 and thirteen years from their senior year), but distinguishing between the same three categories of current educational attendance in all cases: (1) no postsecondary enrollment; (2) enrollment in the two-year sector; and (3) enrollment in the four-year sector.
Highest Postsecondary Institution Attended	Derived from enrollment calendars through wave 6 for early adulthood (when respondents are 24 years of age and six years from their senior year of high school) and postsecondary enrollment in wave 12 for late adulthood models (when respondents are 31 and thirteen years from their senior year), such that highest institution attended accounts for: (1) no postsecondary education consumed; (2)

	enrollment in the two-year sector; and (3) enrollment in the four-year sector.
Inter-Institutional Attendance	Derived from enrollment calendars through wave 6 for early adulthood (when respondents are 24 years of age and six years from their senior year of high school) and postsecondary enrollment in wave 12 for late adulthood models (when respondents are 31 and thirteen years from their senior year), to distinguish between: (1) not attending any postsecondary education; (2) enrollment within only the two-year sector; (3) enrollment within only the four-year sector; and (4) enrollment in the two- and four-year sectors or "inter-institutional" attendance.
Family Socioeconomic and Academic Variables	
Mother's Highest Education	From mother survey when respondents were seniors in high school and distinguishes between mother's highest level of education: (1) high school or less; (2) some college, but no bachelor's degree; and (3) at least a bachelor's degree.
High School Grade Point Average	Respondent's self-reported grade point average during their senior year of high school a 9 point scale (A, A-, B+, B, B-, C+, C, C-, and D/F) and reverse coded to facilitate ease of interpretation in inferential models.
Curricular Track	Distinguishes between those who self-reported being in a college preparatory curriculum (1) from those who did not in their senior year of high school.
Demographic and Other Life Course Variables	
Race	A binary variable, coded 1 if the respondent is white and 0 if "other" or nonwhite.
Gender	A binary variable, coded 1 if the respondent is female and 0 if male.
Married	Based on self-reported relationship status in wave 6 for early adulthood (when respondents are 24 years of age and six years from their senior year of high school) and postsecondary enrollment in wave 12 for late adulthood models (when respondents are 31 and thirteen years from their senior year) with the following distinctions: A) either (1) for married and 0 for other responses in early adulthood or B) (1) for married or cohabiting in late adulthood and 0

	for other responses in late adulthood models.
Parent	Based on self-reported relationship status in wave 6 for early adulthood (when respondents are 24 years of age and six years from their senior year of high school) and postsecondary enrollment in wave 12 for late adulthood models (when respondents are 31 and thirteen years from their senior year), but coded the same in both cases: (1) if respondent indicates having at least one child and 0 if they don't have any kids.

Chapter 4

Results

What sort of educational future do youth expect when they are seniors in high school? How, if at all, do these expectations change over the prolonged transition to adulthood? And what are the mechanisms at play in any changes? Though pointing to different causal mechanisms, conventional wisdom predicts a downward leveling of educational expectations vis-à-vis the community college experience.

First labeled the "cooling out" function around mid-century, early sociologists of education focused on the role that guidance counselors and other agents of the community college played in mediating the disconnect between culturally encouraged educational aspirations on one hand and limited educational opportunities endemic to modern, democratic societies on the other (Clark 1960; Gumport 2007). Roughly three decades later in the late 1980s and into the 1990s, the cooling out moniker remained as did the main tenets of the argument, but the mechanisms explored shifted to that of a class-reproduction model. Following Bowles and Gintis (1976), Brint and Karabel (1989b) suggested that more than the institution itself was at play in any downward leveling of ambition. They pointed to the intersection of institutional type and the socioeconomic background of a student's family of origin as best explaining any cooling out of postsecondary educational expectations (Brint and Karabel 1989a; Pincus 1980). More recently, at the turn of the twenty-first century, amidst seemingly contradictory trends of escalating postsecondary educational expectations on one hand and increasing rates of college dropout on the other (Bound, Lovenheim, and Turner 2009; Schneider and Stevenson 1999), scholars have pointed to a pervasive college-for-all ethos as a new cooling out agent (Anderson et al. 2006; Reynolds et al. 2006; Rosenbaum 2001, 2011a). In this view, the two-year sector

becomes problematic as its open access philosophy allows even poorly prepared, academically-challenged students to believe they can attend college even if they are less well prepared academically than were their counterparts in earlier generations. In the end, this "false" hope diminishes their academic efforts and translates into increased dropout rates.

These are the questions at the heart of this study. The analysis presented in this chapter is divided into four parts in order to answer these questions. First, I sketch the distribution of postsecondary education trajectories across a range of individual, family, and institutional characteristics that previous theory has indicated matter, such as the type of postsecondary educational institution attended, family socioeconomic background, and academic factors in high school, as well as demographic and other life course variables of importance (see Section 4.1). Recall from Chapter 3 that postsecondary expectations are defined in terms of changing and stable bachelor's degree expectations over the transition to adulthood in this study, with "cooling out" (from BA+ to <BA) and "warming up" (from <BA to BA+) representing changing expectations and "steady low" (<BA) and "steady high" (BA+) capturing stable expectations at different ends of the educational spectrum.

Second, I use logistic regression to test competing explanations of the assumed downward leveling of ambition prevalent in the research on community colleges (see Section 4.2). Of particular interest here are comparisons between youth who cool out and those who warm up. Put another way, I am comparing youth who are at the margins of changing expectations. Additionally, attention is paid to comparisons between those who are at the extremes in terms of their bachelor's degree expectations, i.e., between those who never expect to earn a bachelor's degree and those who consistently report expecting to earn at least a

bachelor's degree. These comparisons are interesting on multiple grounds; most notably they reflect comparisons that have historically been made in the literature.

Third, I take advantage of the longitudinal nature of my data to consider how taking a life course approach impacts the dynamics at play in the persistence and change of educational expectations over the transition to adulthood (see Section 4.3). For example, do family socioeconomic background and academic factors in high school continue to drive the degree to which contemporary youth maintain their postsecondary expectations when followed for over a decade after their senior year of high school? For which comparison groups does taking a life course perspective seem to matter the most – those on the margins of changing expectations or those at the extremes? And, of key importance to the central hypotheses proposed here, does extending the longitudinal frame change the role of the two-year sector in the maintenance and change of educational ambitions?

Finally, I examine the implications of capturing inter-institutional attendance relative to other commonly used measures of educational attendance (see Section 4.4). Recall from Chapter 3 that inter-institutional attenders are those youth who have attended both two- and four-year institutions over the transition to adulthood. By 2004, the proportion of YDS youth attending only two-year (31 percent), only four-year (28 percent), or both two- and four-year (29 percent) institutions over the transition to adulthood had reached near parity. This statistic suggests that in terms of numbers alone, this group is worth of more careful consideration rather than being placed in two- or four-year buckets. While these categorizations fit the higher education landscape at the time they were developed, they are now relics from a different era. As such, this dissertation attempts to more appropriately capture the postsecondary institutional attendance experience of contemporary students by using a new measure of inter-institutional attendance.

4.1. Descriptive Portrait

Section 3.2.1 describes the bachelor's degree trajectories of contemporary youth. While a necessary first step in answering the opening questions of this chapter, looking at educational trajectories alone doesn't begin to fully address the questions posed here. What do we know about the bachelor's degree expectations of contemporary youth to this point? Descriptively at least, the data suggest an alternative picture than that suggested by the assumptions underlying dominant theoretical explanations, which have traditionally predicted a downward leveling of ambition for youth attending two-year institutions. We also know that a non-trivial proportion of contemporary youth attend community colleges. Community colleges represent close to half (47 percent) of all enrollments in public, degree-granting institutions in the United States, more than half (52 percent) when limited to undergraduates, and roughly 42 percent of traditional-age enrollments (Snyder and Dillow 2012: Tables 223, 226, and 240). Community colleges also serve a disproportionate number of minority students, who are themselves over-represented in lower socioeconomic strata. In 2011, over half (54 percent) of students attending two-year colleges were nonwhite compared to about 34 percent of all four-year students (Table 264). How, if at all, do these swelling numbers of interaction between contemporary youth and the two-year sector impact the predictions of Clark's cooling out function, Brint and Karabel's diversionary effect, and Rosenbaum's college-for-all ethos? Are contemporary youth in the cooling out trajectory overly represented by two-year college attendance, as well as more likely to come from more economically and academically disadvantaged backgrounds? And how does this change from early to late adulthood?

4.2.1. Early Adulthood

Table 4.1 shows all variables in the predictive models by bachelor's degree trajectory through early adulthood. By six years from their senior year of high school, when most YDS youth are 24, very little cooling out has happened via the four-year sector. Anywhere from 2 to 6 percent of four-year attenders fall into the cooled out trajectory depending on how postsecondary educational attendance is captured. As predicted by dominant theoretical perspectives, far more cooling out occurs vis-à-vis the two-year sector. Roughly 20 percent of two-year attenders fall into the cooling out trajectory within this same timeframe. Interestingly, however, this proportion drops by 11 points when two-year attendance is accounted for as part of inter-institutional attendance. Among those students reporting attendance at two- *and* four-year institutions over their first six years out of high school (i.e., inter-institutional attenders), between 7 and 8 in ten (76 percent) hold steady expectations of earning at least at bachelor's degree, another 14 percent experience a warming up of educational aspirations, and the remaining 9 percent are cooled out. At the other end of the spectrum, among those students who do not attend any postsecondary education in early adulthood, the modal experience is that of consistently not expecting a bachelor's degree or holding steady low bachelor's degree expectations. Yet, even among this group, which consists of individuals who have not interacted with institutions of higher education in the six years since their senior year of high school, there is a non-trivial proportion of warming up and of holding on to aspirations of earning at least a bachelor's degree in the future. Again, depending on the institutional attendance variable used, roughly 7 to 14 percent of YDS youth who had not attended any postsecondary institutions by age 24 experienced warming up and 7 to 18 percent held on to their expectation of earning at least a bachelor's degree.

By six years since their senior year of high school, nearly one in three YDS youth had earned their bachelor's degree (30 percent), one in four had completed some college but not yet earned a degree (25 percent), and nearly one in five (17 percent) had earned a two-year degree. YDS youth earning two-year degrees were fairly well-distributed across bachelor's degree expectation trajectories, with the highest proportion (35 percent) never expecting a bachelor's degree in early adulthood. That is, for these youth, earning the two-year degree was their goal and they accomplished it. Even more dramatically, however, among those YDS youth earning at least a bachelor's degree by age 24, holding steady expectations were nearly universal with 97 percent falling in the holding steady high trajectory. These trends are in line with other research showing the growing prominence and maintenance of bachelor's degree expectations beyond adolescence, even in the face of repeated roadblocks to degree completion (Alexander et al. 2008; Andrew and Hauser 2012; Domina, Conley, and Farkas 2011a, 2011b; Goyette 2008; Hanson 1994; Ingles and Dalton 2008; Jacob and Wilder 2010; Johnson and Reynolds 2013; Reynolds et al. 2006; Rosenbaum 2011b; Trusty and Harris 1999; Trusty 2000; Uno et al. 2010). Research also suggests that although expectations have become somewhat less predictive of degree completion over the past several decades, they remain strong predictors of attainment above and beyond standard determinants including family background characteristics (Jacob and Wilder 2010).

In addition to helping us to understand the intersection of educational expectations and institutional attendance in early adulthood, Table 4.1 also carefully considers how family socioeconomic and academic backgrounds intersect with educational expectations in early adulthood. Low-resource youth, both in terms of family and academic backgrounds, are more likely than high-resources ones to fall in the cooling out trajectory. With respect to

socioeconomic background for example, there is a 10-point differential across the socioeconomic extremes in the percentage of youth who were cooled out by age 24. Specifically, 17 percent of youth whose mother noted high school as her highest level of education were cooled out versus only 7 percent of those whose mother had earned least a bachelor's degree. Differences in terms of involvement in college preparatory curriculum in high school were similar: 18 percent of youth not in college preparatory programs in high school were cooled out versus only 8 percent of those enrolled in such programs.

Differentials were fairly similar among warmed up youth in terms of academic resources like college preparation (7 points). However, differences in terms of economic resources between low- and high-resource youth narrowed some, with 13 percent of youth whose mother noted high school as her highest level of education experiencing warming up and 9 percent at the higher educational extreme (i.e., mother earning at least a bachelor's degree). Overall though, differentials between low- and high-resource youth were much more pronounced in the holding steady groups, but in different directions. Similarly, the differences in terms high school grade point average were most pronounced between the steady high and steady low groups, with the warming up and cooling out groups falling between these extremes. Youth with steady high expectations reported an average grade point average of 6.81, while their classmates holding steady low expectations reported an average of 4.11. Meanwhile, the differences between those who were cooled out and those who warmed up were virtually indistinguishable from one another at 5.24 for the warmer uppers and 5.34 for the cooling out group.

4.2.2. Late Adulthood

As shown in Figure 3.1, late adulthood is captured in two ways in this study. The first (late adulthood I) reflects current configurations used in the sociological research on

postsecondary expectations over the transition to adulthood, while the second (late adulthood II), takes advantage of the longitudinal data used in this study. These configurations also build on models used to study earlier cohorts of youth. Tables 4.2 and 4.3 reflect the descriptive portraits of late adulthood I and late adulthood II, respectively. Both are included here for thoroughness, but for the sake of clarity in the descriptive portrait presented, this section focuses on late adulthood II. In both cases, results are limited to those youth who have not completed a degree within six years of their senior year of high school. These are the youth for whom bachelor's degree expectations still matter.

In looking at key descriptive characteristics by bachelor's degree trajectories through age 24 in Table 4.1, we picked up on some key trends related to institutional attendance, as well as economic and academic resources for a contemporary cohort of youth. What happens when we expand this portrait to account for the prolonged transition to adulthood? Above, we saw that conventional definitions of institutional attendance worked in the expected ways with the two-year sector accounting for proportionately more cooling out than the amount happening at four-years. On the other hand, community colleges also accounted for proportionately more warming up. Accounting for inter-institutional attendance further focused the picture. Even in early adulthood, inter-institutional attenders "looked" more similar to their four-year only counterparts than to their two-year classmates who had not also attended four-year institutions. Here, we follow these same institutional trends through late adulthood, as well as look at the continued trends in terms of economic and academic disadvantage.

As expected, given the additional selection criteria removing those youth completing at least a bachelor's degree from the late adulthood analyses, the group observed here represents a less advantaged group overall compared to that studied in early adulthood. While direct

comparisons between early and late adulthood should not be made, it is informative to see what institutional attendance looks like through age 31. By over a decade since high school, 11 percent of noncompleters had not attended any postsecondary education, 46 percent had attended only two-year institutions, 13 percent only four-year institutions, and 30 percent had attended both two- and four-year institutions. Interestingly, there were virtually no differences in the proportions of inter-institutional and four-year only attenders who were cooled out (roughly 11 percent in both cases) or who maintained steady low education expectations (3 percent of four-year only attenders and no inter-institutional attenders). Where these groups diverged, however, was in the proportions of young adults in these categories who had always expected to earn at least a bachelor's degree and those who had warmed up to the idea over time. Young adults who had always expected to earn a bachelor's degree were 21 points more likely to attend only four-year institutions than both institutional types (66 percent of the four-year only group versus 45 percent of the inter-institutional attenders). Alternately, inter-institutional attenders were about 23 points more likely to fall into the warming up group than their four-year only friends (44 percent of the inter-institutional attenders versus 21 percent of the four-year only group).

The persistence with which these lower-resourced young adults hung on to optimistic hopes for their educational futures is pronounced when looking at institutional attendance by current institution attended. For example, the majority of noncompleters who had not attended any postsecondary education fell into one of the two most favorable trajectories in terms of positive educational expectations. Taken together, 54 percent of YDS youth who had not yet attended any postsecondary education by age 31 either maintained expectations of earning at least a bachelor's degree throughout the nearly decade and a half studied or they experienced a warming up of education expectations over time (21 percent held steady high and 33 percent

warmed up). This drops significantly in the remaining configurations of institutional attendance, which leads to a question of just how many of these young adults complete some level of postsecondary education in late adulthood. Put another way, given what we know about the degree to which expectations matter to completion early in adulthood (Jacob and Wilder 2010), do they continue to matter in a way that leads to degree completion later on? Nearly half of those young adults who had not earned a bachelor's degree within six years of high school, went on to complete either a two-year (29 percent) or a four-year degree (15 percent) between the ages of 25 and 31 as shown in Table 4.1.

Though still pronounced relative to the degree of difference between low- and high-resource youth in the cooling out and warming up trajectories, the size of the differential in terms of economic and academic background within the holding steady high group reduces in late adulthood. This is not surprising given the relative disadvantage of the subpopulation studied here. More surprising, however, is the reversal in the direction of the difference between socioeconomic extremes where young adults experienced warming up. Whereas in early adulthood a higher proportion of youth with mothers at the low end of the education distribution fell into the warming up category, in late adulthood this had flipped and young adults with mothers at the high end of the educational distribution held a 6-point advantage in this regard. The size of this differential also paled in comparison to those in the holding steady categories.

4.2. Statistically Controlled Comparisons of Bachelor's Degree Expectation Trajectories in Early Adulthood

Clark's cooling out hypothesis, Brint and Karabel's diversionary thesis, and Rosenbaum's college-for-all ethos all find some support in these descriptive data. For example, we see support for Clark in the fact that a higher proportion of two-year attenders fall into the cooling out trajectory than among four-year attenders, though this changes somewhat when we

account for inter-institutional attendance. Brint and Karabel's diversionary thesis and Rosenbaum's college-for-all ethos find the most support in early adulthood when large differentials exist between high- and low-resource groups in terms of the proportion of youth consistently expecting to earn at least a bachelor's and those consistently expecting the opposite. These differentials work in the expected directions. Higher resource youth are more likely to be in the holding steady high trajectory, while relatively lower resource youth are more likely to fall in the holding steady low trajectory. Due in part to the relative disadvantage of the late adulthood groups, these differences still exist in late adulthood, but they narrow, suggesting that other dynamics are likely at play. Similarly, both in early and in late adulthood, youth (and later their young adult selves) exhibit resilience with respect to their educational expectations.

In this section, I employ a series of multivariate models predicting educational expectations by age 24 (early adulthood). These models measure postsecondary attendance in terms of inter-institutional attendance. Economic and academic resources are captured according to the measures laid out in Chapter 3 and a range of demographic and other life course controls are also included (see Table 3.1 for a summary of how variables have been operationalized). Because the multinomial logit model is essentially estimating a series of logistic regressions all at once, there are many comparisons being made beyond the ones highlighted here. While additional comparisons are included in the Appendix for thoroughness, this section focuses in on the comparisons of key interest based on the questions posed here. Table 4.4 compares youth at the margins of changing expectations, namely those who are warming up versus cooling out in Model 1. Previous research (see, for example, Johnson and Reynolds 2013) has omitted results comparing these groups as there were very few factors significantly differentiating between these two trajectories. I too find very few distinguishing factors between these groups. However, given

the importance of this comparison to the ideas tested here and evidence that these outcome trajectories are in fact meaningfully different ($p < 0.04$), I include the comparison of warming up versus cooling out as a key comparison in my results. I also compare each of these groups to their relatively advantaged counterparts who hold steady high expectations in Models 2 and 3 of the same table. Next, I shift my attention to comparisons between those who are the worst off in terms of educational trajectories with steady low educational expectations compared to their counterparts on the margins of changing expectations in Model 1 of Table 4.5, as well as those at the opposite extreme with steady high expectations in Models 2 and 3 of the same table.

Taken together, Tables 4.4 and 4.5 examine the extent to which institutional attendance, economic resources, and academic resources influence young people's expectation trajectories, controlling for demographic and other life course variables in the model. Odds ratios and z-scores are provided to ease interpretation. Odds ratios greater than or equal to 1 indicate a positive relationship, while odds ratios less than 1 indicate a negative relationship. Given odds ratios are exponentiated and therefore no longer in the same metric as the standard error, presenting these does not add much information for the reader. Z-scores are preferable in this case to the standard errors commonly used in normal ordinary least squares regression because they give a clearer sense of the strength of the relationship without having to calculate it manually.

Table 4.4 shows that attending some form of postsecondary education is strongly related to distinguishing between cooling out, warming up, and the maintenance of stable expectations for at least a bachelor's degree, but varies in size and significance depending on the comparisons made. Meanwhile, family and academic background variables make no difference in distinguishing between these trajectories. While perhaps not so surprising when comparing

between warming up and cooling out given our above descriptive analysis showing that members of these groups are quite similar when compared across a host of key characteristics, this is more surprising when we consider that institutional effects become even stronger when compared to the relatively advantageous group of youth who hold steady high expectations of earning at least a bachelor's degree through early adulthood. Indeed, the only predictor of membership other than postsecondary institutional attendance of holding stable high expectations versus either cooling out or warming up is becoming a parent, which actually works in the reverse direction. Indeed, those YDS youth who become parents by age 24 are 55 percent less likely to hold stable high expectations than to cool out and 62 percent less likely to maintain bachelor's expectations than to warm up, when all other variables in the model are held constant ($p < 0.001$).

On the surface, Table 4.4 shows some support for a strict Clark interpretation of cooling out, given there's no effect for two-year only attendance across all comparisons, but strong, positive influence of the four-year sector, at least when comparing those with changing expectations to those who consistently report expecting to earn a bachelor's degree in early adulthood (Models 2 and 3). The story becomes more complex when we look at inter-institutional attendance. For example, Model 1 shows the key comparison between warming up and cooling out. While Clark never considered warming up in his early work, he suggested it was a possibility in need of more consideration when he revisited his initial hypothesis twenty years later (Clark 1980). I find that the odds of warming up relative to cooling out are 4.44 greater for inter-institutional attenders than for those not attending any postsecondary institution, controlling for all other variables in the model. Put another way, inter-institutional attenders are 344 percent more likely than those not attending any postsecondary education by age 24 to experience a ratcheting up of their bachelor's degree expectations.

As expected, given the differences we observed with respect to institutional attendance among different expectation trajectories, these institutional effects grow in size and magnitude when youth who hold steady high expectations are compared to those who cool out their educational expectations (Model 2) or who warm up over time (Model 3). In these comparisons, four-year attendance also increases the odds of maintaining high steady expectations relative to cooling out, though the odds are difficult to interpret due to small case sizes for some independent variables (Hosmer and Lemeshow 2004). It is noteworthy, however, that the odds of being in the steady high trajectory relative to cooling out are 1.7 times higher for four-year only attenders than for inter-institutional attenders and attending only a two-year institution (compared to not attending any postsecondary education) makes no difference in terms of trajectory assignment. When comparing the steady high ideal to warming up, the story is similar, although the institutional effect is limited to those youth attending only four-year institutions and is half the size of the same effect when comparing those holding steady high expectations to those who have cooled out.

What about those for whom higher education is least likely? While the previous table was informative for understanding the competing influences of institutions, families, and academic preparedness on students at the margins of continued bachelor's expectations, Table 4.5 addresses what these competing influences look like for the relatively disadvantaged peers of these youth, i.e., those youth who consistently report not expecting to earn a bachelor's degree up to six years out of high school (steady low). These students fall into the historical mission of the community college or "democracy's college" to open up access to higher education for those least likely to attend. Indeed, volumes of research on community colleges and their students have shown they are more likely to be nontraditional students, however defined, be they nonwhite,

first-generation, low-income, or a host of other characteristics (Kim 2002; Reed 2013a). Put another way, Table 4.5 examines the extent to which institutional attendance, family background, and academic resources matter for those who consistently see themselves as being out of the educational game. Specifically, what distinguishes assignment into cooling out (Model 1), warming up (Model 2), and steady high (Model 3) expectation trajectories versus the stable low group? Given there were not any students in the "steady low" group for some categories of variables included in the model, the multinomial logit used here cannot technically predict the likelihood of an outcome of which there are no individuals present. However, the questions posed here and the descriptive analysis in Tables 4.1 through 4.3 show that disentangling whether an individual maintains high or low expectations matters to the questions posed here. Supplemental results are included in Appendix A.10 of the same model as in Table 4.5, only with the dependent variable reconstructed to include one category of "steady" postsecondary educational expectations.

The most consistent finding across these three comparison groups is that being in a college preparatory program in high school matters a great deal to assignment in trajectories other than stable low. The odds of cooling out relative to not holding any bachelor's expectations are 2.80 greater for those in a high school college prep programs than for those who are not, controlling for all other variables in the model ($p < 0.001$). That is, college preparatory students are 180 percent more likely than those in other tracks to cool out than hold steady low. This effect gains strength and magnitude in Models 2 and 3. Similarly, when looking at high school grade point average, we see that the better students perform in high school, the more likely they are to experience cooling out (as well as warming up and holding steady high expectations).

On one hand, these results provide some support for Rosenbaum's predictions of a downward leveling of ambition, especially for those who don't perform well in high school, which we see in the significant, positive influence of high school academics on cooling out. However, on the other hand, this downward leveling of ambition does not occur vis-à-vis the two-year sector. Quite the contrary, in Models 2 and 3, the two-year sector acts in the opposite direction predicted, the odds of warming up or holding steady high versus holding steady low are 5 times greater for those attending only two-year colleges than those who do not attend any postsecondary education. And these odds increase exponentially for those attending only four-year colleges. While inter-institutional attendance does not hold any predictive power for these comparisons, it's hard to say exactly given the small sample size of the comparison group. These institutional effects further reinforce the finding from above that there is more going on within the higher education sector than current theories account for.

Table 4.5 also provides some support for older ideas of class driving expectation trajectories, although again, it does not appear at least from these models that this is driven by intersections with the two-year sector. While family socioeconomic status (as measured by mother's education) matters at the upper levels of the distribution in distinguishing between warming up or holding steady high versus holding steady low, it does not drive differences in expectation trajectories between otherwise similar students who cool out versus those who never expect to earn at least a bachelor's degree. The odds of warming up to the idea of or consistently expecting to earn at least a bachelor's degree relative to never holding such expectations are 4 times greater for those with mother's who have at least a bachelor's degree than those whose mothers don't have any postsecondary education.

4.3. Taking the Long View

What happens to the relative significance and size of institutional, family, and academic effects when we expand the longitudinal frame? As discussed in Chapter 3, our dominant four-year ideology, combined with the limitations inherent with existing data which stop asking students about their educational expectations beyond the normative timeframe, and spillover affects from student right-to-know legislation means we know relatively little about the intersection of educational expectations, family background, academic preparedness, and institutional attendance in late adulthood (Morgan 2004). The unique longitudinal nature of the YDS data allows me to ask these questions not only for early adulthood, but for the period of late adulthood as well.

How do institutional attendance, family socioeconomic background, and academic background influence whether otherwise similar youth experience a ratcheting up of educational expectations (warm up) or the downward leveling of educational ambitions predicted in earlier theories? And specifically how does our understanding of these relationships change when we expand the longitudinal view? Table 4.6 focuses in on my key comparison (warming up versus cooling out) and shows how the associated odds ratios and z-scores change from early adulthood into late adulthood (categorized two ways). Additionally, Table 4.6 draws out the implications of differing conceptions of late adulthood and how they matter for how we view these relationships. Recalling from Chapter 3, both late adulthood models are limited to those youth who had not yet completed a bachelor's degree by age 24, which fits with the calculations used to determine college completion rates. These models differ in that late adulthood I considers the change and persistence in bachelor's degree expectations from age 25 to age 31 only, while late adulthood II considers the entire educational expectation trajectory from one year out of high school (age 19)

to age 31 when respondents were 13 years from their senior year of high school. As such, late adulthood I tells us a bit more about the change and persistence in educational plans beyond the normative period of college-going and late adulthood II allows for a stronger life course perspective.

As highlighted above and shown in Model 1 of Table 4.4, we know that the odds of warming up relative to cooling out are nearly four and a half times greater for inter-institutional attenders than for those not attending any postsecondary, controlling for all other variables in the model. Further, we know that youth in these trajectories don't differ along other key comparisons such as family socioeconomic status and academic factors. But does inter-institutional attendance matter for those who haven't completed their bachelor's degree within the expected 4 to 6 years from high school? It depends. Late adulthood I shows no effect of inter-institutional attendance in determining the odds of warming up versus cooling out. However, late adulthood II shows an extension of what we saw in early adulthood. That is, the impact of inter-institutional attendance nearly doubles. The odds of warming up relative to cooling out are 8 times greater for inter-institutional attenders than for those who don't attend any postsecondary education by age 31.

The warming up versus cooling out comparison tells us something about students at the margins between holding expectations of earning at least a bachelor's degree or floundering between such expectations and not holding such expectations. However, it doesn't tell us anything about students at the extremes. In fact, it has been comparisons at the extremes that has driven much research to date about the role of community colleges in the lives of traditional-age college students. Table 4.7 compares the odds of consistently holding expectations of earning at least a bachelor's degree through the prolonged transition to adulthood (again, even when youth haven't earned their bachelor's degree within 6 years of high school) relative to never holding

such expectations. As we might expect given the extreme differences in the day-to-day realities of youth and later young adults at opposite ends of the expectations spectrum, regardless of how late adulthood is characterized, family socioeconomic background and early academic factors matter a great deal from early adulthood through late adulthood. Differences do emerge, however, in whether the type of postsecondary institution attended matters (if at all) in the odds of holding steady high versus steady low bachelor's degree expectations. These differences (and non-differences in some cases) are driven by a variety of factors beyond how late adulthood is captured, including small case size, the local nature of the students surveyed, and how postsecondary institutional attendance is captured. More research is needed in all these areas as discussed in more detail in Chapter 5. For now, I turn my attention to the question of how best to capture institutional attendance in research on the change and persistence of educational expectations and intersection of institutional type over the transition to adulthood.

4.4. Does Inter-Institutional Attendance Matter?

While I am interested in how educational expectations change or persist over the prolonged transition to adulthood and how shifts intersect with institutions, family, and academic background, I am particularly interested in the role of community colleges in mediating these relationships, especially given the focus the sector has received in much of the existing theory related to cooling out, diversions, and the college-for-all ethos. As such, a careful analysis of how postsecondary education is traditionally captured compared to the categorization introduced in Chapter 3 of inter-institutional attendance is warranted.

Table 4.8 returns to our key comparison of interest – warming up versus cooling out – and includes the traditionally used variables for capturing postsecondary education if it is captured at all: currently attending (Johnson and Reynolds 2013) and highest postsecondary

institution attended (Alexander et al. 2008), as well as the new measure of inter-institutional attendance proposed here. Much of the burgeoning literature on the change and maintenance of educational expectations beyond high school has focused on race, gender, and class effects, with relatively little treatment of institutional effects (Domina et al. 2011b; Hanson 1994; Trusty and Harris 1999; see Alexander et al. 2008; Johnson and Reynolds 2013 for exceptions). Current institution attended and highest postsecondary work in unexpected ways based on the hypotheses presented here. Current institution attended shows two-year institutions increasing the odds of warming up over cooling out, but only in early adulthood, and no four-year effect, while highest institution attended shows four-year effects but only in late adulthood. Inter-institutional attendance behaves in a manner consistent with the alternative hypotheses proposed here. That is, attending a community college en route to a four-year college or university is the key distinguishing factor between those who warm up and cool out. Further, this effect nearly doubles by late adulthood, suggesting that current approaches to assessing the effectiveness of the two-year sector which stop following students after four to six years of their senior year and exclude students who haven't earned an associate's degree en route to their bachelor's from completion figures don't present the full picture. They also assume the role of the two-year sector is limited to traditional transfer from two- to four-year sector. However, an analysis of institution-going patterns within my inter-institutional attendance category suggests a non-trivial proportion of students also travel in the opposite direction: starting at a four-year institution and reverse transferring to a two-year college. While the inter-institutional measure offered here has limitations of its own (discussed further in Chapter 5), it is a marked improvement over previous measures of postsecondary institutional attendance and points to the need for more research examining the implications of the heterogeneity within this group.

Table 4.1. Basic Characteristics by Bachelor's Degree Expectation Trajectories in Early Adulthood, Senior Year to Six Years out of High School, 1991-1997 (N = 476)

			Bachelor's Degree Expectation Trajectories[a]			
	n	Percent	Cooled Out	Warmed Up	Steady Low	Steady High
Postsecondary Education and Related Variables						
Currently Attending						
No postsecondary education	*69*	14.50	21.21	12.63	47.98	18.18
Two-year	*162*	34.03	20.55	27.40	26.03	26.03
Four-year	*245*	51.47	2.44	4.39	0.00	93.17
Highest Postsecondary Institution Attended						
No postsecondary education	*69*	14.50	21.74	7.25	63.77	7.25
Two-year	*162*	34.03	20.37	20.37	42.59	16.67
Four-year	*245*	51.47	5.71	6.53	0.41	87.35
Inter-Institutional Attendance						
No postsecondary education	*69*	14.50	21.74	7.25	63.77	7.25
Two-year only	*162*	34.03	20.37	20.37	42.59	16.67
Four-year only	*169*	35.50	4.14	2.96	0.59	92.31
Two- and four-year attendance	*76*	15.97	9.21	14.47	0.00	76.32
Completion[b]						
No postsecondary degree	*119*	25.81	17.65	14.29	54.62	13.45
Some college, no degree	*121*	75.16	18.18	14.88	10.74	56.20
Two-year degree	*79*	17.14	20.25	17.72	35.44	26.58
At least bachelor's	*142*	30.80	0.70	1.41	0.70	97.18
Socioeconomic Background and Academic Factors						
Mother's Highest Education						
High school or less	*200*	42.02	17.00	12.50	36.00	34.50
Some college, no bachelor's	*147*	30.88	12.93	12.24	24.49	50.34
At least bachelor's	*129*	27.10	6.98	8.53	4.65	79.84
Academic Variables						
High school grade point average[a]	*476*	100.00	5.34	5.24	4.11	6.81
Not in college preparatory program	*233*	48.95	18.03	15.02	45.06	21.89
College preparatory program	*243*	51.05	8.23	7.82	3.70	80.25
Demographic and Other Life Course Variables						
Race						
White	*396*	83.19	11.62	11.87	24.75	51.77
Nonwhite	*80*	16.81	20.00	8.75	20.00	51.25
Gender						
Male	*205*	43.07	13.17	11.22	22.93	52.68
Female	*271*	56.93	12.92	11.44	24.72	50.92
Family Formation						
Married	*87*	18.28	13.79	16.09	29.89	40.23
Not married	*389*	81.72	12.85	10.28	22.62	54.24
At least one kid	*109*	22.90	19.27	17.43	45.87	17.43
No kids	*367*	77.10	11.17	9.54	17.44	61.85

Notes: (a) Bachelor's degree expectation trajectories total to 100 percent, allowing for small rounding errors. This is not the case, however, for high school grade point average, which represents the mean for each group on a nine-point scale.(b) Completions are included for context but not in the models, therefore the amount of missing data vary slightly. For this group N = 461.

Table 4.2. Basic Characteristics by Bachelor's Degree Education Trajectory in Late Adulthood I, Seven to Thirteen Years out of High School, 1998-2004 (N = 298)[a]

			Bachelor's Degree Expectation Trajectories[b]			
	n	Percent	Cooled Out	Warmed Up	Steady Low	Steady High
Postsecondary Education and Related Variables						
Currently Attending						
No postsecondary education	*239*	80.20	9.62	20.92	41.42	28.03
Two-year	*27*	9.06	11.11	33.33	29.63	25.93
Four-year	*32*	10.74	3.13	28.13	0.00	68.75
Highest Postsecondary Institution Attended						
No postsecondary education	*141*	47.32	9.22	18.44	58.87	13.48
Two-year	*73*	24.50	13.70	32.88	32.88	20.55
Four-year	*84*	28.19	4.76	21.43	0.00	73.81
Inter-Institutional Attendance						
No postsecondary education	*141*	47.32	9.22	18.44	58.87	13.48
Two-year only	*73*	24.50	13.70	32.88	32.88	20.55
Four-year only	*48*	16.11	4.17	18.75	0.00	77.08
Two- and four-year attendance	*36*	12.08	5.56	25.00	0.00	69.44
Completion						
No postsecondary degree	*60*	20.13	10.00	11.67	78.33	0.00
Some college, no degree	*107*	35.91	9.35	35.51	17.76	37.38
Two-year degree	*85*	28.52	11.76	25.88	48.24	14.12
At least bachelor's	*46*	15.44	2.17	2.17	0.00	95.65
Socioeconomic Background and Academic Factors						
Mother's Highest Education						
High school or less	*145*	48.66	8.97	23.45	51.72	15.86
Some college, no bachelor's	*100*	33.56	12.00	23.00	25.00	40.00
At least bachelor's	*53*	17.79	3.77	20.75	13.21	62.26
Academic Variables						
High school grade point average[b]	*298*	100.00	4.81	5.04	4.60	5.82
Not in college preparatory program	*192*	64.43	9.38	23.44	48.44	18.75
College preparatory program	*106*	35.57	8.49	21.70	13.21	56.60
Demographic and Other Life Course Variables						
Race						
White	*247*	82.89	8.91	20.65	38.06	32.39
Nonwhite	*51*	17.11	9.80	33.33	25.49	31.37
Gender						
Male	*123*	41.28	8.13	18.70	39.02	34.15
Female	*175*	58.72	9.71	25.71	33.71	30.86
Family Formation						
Cohabitating/married	*205*	68.79	7.80	20.98	36.10	35.12
Not cohabitating /married	*93*	31.21	11.83	26.88	35.48	25.81
At least one kid	*185*	62.08	9.19	23.24	41.08	26.49
No kids	*113*	37.92	8.85	22.12	27.43	41.59

Notes: (a) Limited to those who had not completed a degree within six years of high school; (b) Bachelor's degree expectation trajectories total to 100 percent, allowing for small rounding errors. This is not the case, however, for high school grade point average, which represents the mean for each group on a nine-point scale.

Table 4.3. Basic Characteristics by Bachelor's Degree Expectation Trajectories in Late Adulthood II, Senior Year to Thirteen Years out of High School, 1991-2004 (N = 294)[a]

			Bachelor's Degree Expectation Trajectory[b]			
	n	Percent	Cooled Out	Warmed Up	Steady Low	Steady High
Postsecondary Education and Related Variables						
Currently Attending						
No postsecondary education	*239*	81.29	20.50	33.05	25.10	21.34
Two-year	*24*	8.16	16.67	50.00	20.83	12.50
Four-year	*31*	10.54	0.00	41.94	0.00	58.06
Highest Postsecondary Institution Attended						
No postsecondary education	*33*	11.22	24.24	12.12	63.64	0.00
Two-year	*134*	45.58	23.13	39.55	32.09	5.22
Four-year	*127*	43.20	11.02	37.01	0.79	51.18
Inter-Institutional Attendance						
No postsecondary education	*33*	11.22	24.24	12.12	63.64	0.00
Two-year only	*134*	45.58	23.13	39.55	32.09	5.22
Four-year only	*38*	12.93	10.53	21.05	2.63	65.79
Two- and four-year attendance	*89*	30.27	11.24	43.82	0.00	44.94
Completion						
No postsecondary degree	*60*	20.41	25.00	18.33	56.67	0.00
Some college, no degree	*104*	35.37	17.31	51.92	4.81	25.96
Two-year degree	*85*	28.91	22.35	40.00	30.59	7.06
At least bachelor's	*45*	15.31	2.22	11.11	0.00	86.67
Socioeconomic Background and Academic Factors						
Mother's Highest Level of Education						
High school or less	*143*	48.64	24.48	30.77	32.17	12.59
Some college, no bachelor's	*99*	33.67	12.12	41.41	17.17	29.29
At least bachelor's	*52*	17.68	11.54	36.54	3.85	48.08
Academic Variables						
High school grade point average[b]	*294*	100.00	5.34	5.04	4.22	5.99
Not in college preparatory program	*190*	64.63	19.47	34.74	32.63	13.16
College preparatory program	*104*	35.37	15.38	36.54	2.88	45.19
Demographic and Other Life Course Variables						
Race						
White	*243*	82.65	17.28	34.16	24.69	23.87
Nonwhite	*51*	17.35	21.57	41.18	9.80	27.45
Gender						
Male	*121*	41.16	21.49	29.75	21.49	27.27
Female	*173*	58.84	15.61	39.31	22.54	22.54
Family Formation						
Cohabitating/married	*200*	68.03	18.00	33.00	22.00	17.00
Not cohabitating /married	*94*	31.97	18.09	40.43	22.34	19.15
At least one kid	*179*	60.88	18.99	35.75	26.26	18.99
No kids	*115*	52.72	15.52	34.78	15.65	33.04

Notes: (a) Limited to those who had not completed a degree within six years of high school; (b) Bachelor's degree education trajectories total to 100 percent, allowing for small rounding errors. This is not the case, however, for high school grade point average, which represents the mean for each group on a nine-point scale.

Table 4.4. Multinomial Logistic Regression Models Predicting Expectation Trajectories in Early Adulthood, Warming Up versus Cooling Out (N = 476)

	Model 1 Warming Up vs. Cooling Out		Model 2 Steady High vs. Cooling Out		Model 3 Steady High vs. Warming Up	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Postsecondary Education[a]						
Two-year only	0.33	(-1.80)	2.99	(1.80)	1.04	(0.05)
Four-year only	2.01	(0.82)	32.41***	(4.93)	16.09***	(3.29)
Two- and four-year (inter-institutional)	4.44*	(2.03)	18.89***	(4.26)	4.26	(1.92)
Economic and Academic Resources						
Mother's Highest Education[b]						
Some college, no bachelor's	1.31	(0.61)	1.64	(1.21)	1.26	(0.54)
At least bachelor's	1.71	(0.96)	1.92	(1.33)	1.13	(0.25)
Academic Variables						
High school GPA	0.92	(-0.69)	1.03	(0.29)	1.12	(1.02)
College preparatory program[c]	1.15	(0.29)	2.53	(2.18)	2.20	(1.78)
Demographic and Other Life Course Variables[d]						
White	2.14	(1.44)	0.91	(-0.21)	0.42	(-1.64)
Female	1.06	(0.15)	0.99	(-0.01)	0.94	(-0.16)
Married	1.24	(0.24)	1.06	(0.13)	0.86	(-0.32)
Kid(s)	1.19	(0.39)	0.45*	(-1.75)	0.38*	(-2.10)

Notes: Reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids. Wald X^2 (df=33) = 421.19***; Pseudo-R^2 = 0.37; * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 4.5. Multinomial Logistic Regression Models Predicting Expectation Trajectories in Early Adulthood, Comparisons to Steady Low (N = 476)

	Model 1 Cooling Out vs. Steady Low		Model 2 Warming Up vs. Steady Low		Model 3 Steady High vs. Steady Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Postsecondary Education[a]						
Two-year only	1.85	(1.54)	5.33**	(3.09)	5.52**	(2.88)
Four-year only[1]	7.34	(1.71)	14.79*	(2.16)	238.03***	(4.71)
Two- and four-year (inter-institutional)	6.04	(0.03)	2.68	(0.03)	1.14	(0.03)
Economic and Academic Resources						
Mother's Highest Education[b]						
Some college, no bachelor's	1.00	(0.01)	1.31	(0.65)	1.64	(1.18)
At least bachelor's	2.44	(1.38)	4.17*	(2.20)	4.70*	(2.38)
Academic Variables						
High school GPA	1.42***	(3.28)	1.31*	(2.38)	1.46**	(3.29)
College preparatory program[c]	2.80*	(2.01)	3.22*	(2.15)	7.08***	(3.73)
Demographic and Other Life Course Variables[d]						
White	0.32*	(-2.52)	0.68	(-0.70)	0.29*	(-2.44)
Female	0.64	(-1.20)	0.68	(-0.96)	0.64	(-1.11)
Married	0.87	(-0.31)	1.07	(0.15)	0.92	(-0.16)
Kid(s)	0.74	(-0.76)	0.88	(-0.30)	0.33*	(-2.36)

Notes: (1) As explained in detail on page 85, the odds ratio in Model 3 is not interoperable given there aren't any individuals in the steady low category who meet this criteria of four-year only attendance. Supplemental results are included in Appendix A.10 collapsing the steady categories. Also note that reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids. Wald Wald X^2 (df =33) = 421.19***; Pseudo-R^2 = 0.37; * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 4.6. Multinomial Logistic Regression Models Predicting Expectation Trajectories in Different Stages of Adulthood, Warming Up versus Cooling Out

	Model 1 Early Adulthood		Model 2 Late Adulthood I		Model 3 Late Adulthood II	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Postsecondary Education[a]						
Two-year only	0.33	(-1.80)	1.18	(0.33)	3.41	(1.82)
Four-year only	2.01	(0.82)	4.80	(2.94)	3.53	(1.37)
Two- and four-year (inter-institutional)	4.44*	(2.03)	3.30	(2.23)	8.01**	(2.82)
Economic and Academic Resources						
Mother's Highest Education[b]						
Some college, no bachelor's	1.31	(0.61)	2.04	(1.67)	2.20	(1.88)
At least bachelor's	1.71	(0.96)	2.68	(2.00)	2.03	(1.28)
Academic Variables						
High school GPA	0.92	(-0.69)	1.15	(1.27)	0.88	(-1.17)
College preparatory program[c]	1.15	(0.29)	1.65	(1.22)	1.15	(0.30)
Demographic and Other Life Course Variables[d]						
White	2.14	(1.44)	1.97	(1.39)	1.17	(0.34)
Female	1.06	(0.15)	0.67	(-1.02)	2.09	(-1.93)
Married	1.24	(0.24)	2.16	(1.71)	0.77	(-0.61)
Kid(s)	1.19	(0.39)	0.62	(-1.12)	0.83	(-0.43)
N	*476*		*298*		*294*	
Wald Statistic	X^2 *(df=33)=421.19****		X^2*(df=33)=198.42****		X^2*(df=33)=218.43****	
Pseudo-R^2	*0.37*		*0.25*		*0.27*	

Notes: Reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 4.7. Multinomial Logistic Regression Models Predicting Expectation Trajectories in Different Stages of Adulthood, Steady High versus Steady Low

	Model 1 Early Adulthood		Model 2 Late Adulthood I		Model 3 Late Adulthood II	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Postsecondary Education[(a)]						
Two-year only	5.52**	(2.88)	4.09**	(2.92)	8.67	(0.01)
Four-year only	238.03***	(4.71)	8.35	(0.02)	2.56	(0.01)
Two- and four-year (inter-institutional)	1.14	(0.03)	1.05	(0.02)	3.84	(0.02)
Economic and Academic Resources						
Mother's Highest Education[(b)]						
Some college, no bachelor's	1.64	(1.18)	3.22*	(2.55)	3.25*	(2.10)
At least bachelor's	4.70*	(2.38)	4.48*	(2.48)	8.95*	(2.33)
Academic Variables						
High school GPA	1.46**	(3.29)	1.32*	(2.22)	1.42*	(2.34)
College preparatory program[(c)]	7.08***	(3.73)	3.95**	(2.76)	5.90*	(2.21)
Demographic and Other Life Course Variables[(d)]						
White	0.29*	(-2.44)	0.93	(-0.13)	0.28	(-1.78)
Female	0.64	(-1.11)	1.05	(0.11)	0.98	(-0.03)
Married	0.92	(-0.16)	1.75	(1.13)	1.69	(0.88)
Kid(s)	0.33*	(-2.36)	0.40*	(-1.98)	0.35	(-1.77)
N	*476*		*298*		*294*	
Wald Statistic	$X^2(df=33)=421.19$***		$X^2(df=33)=198.42$***		$X^2(df=33)=218.43$***	
Pseudo-R^2	*0.37*		*0.25*		*0.27*	

Notes: Reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 4.8. Multinomial Logistic Regression Models Predicting Expectation Trajectories across Different Stages of Adulthood and Institutional Attendance Categorizations, Warming Up versus Cooling Out

	Early Adulthood (N = 476)						Late Adulthood II (N = 294)					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	odds ratio (z-score)		odds ratio (z-score)		odds ratio (z-score)		odds ratio (z-score)		odds ratio (z-score)		odds ratio (z-score)	
Postsecondary Education[a]												
Currently Attending												
Two-year	2.43*	(2.04)					1.66	(0.80)				
Four-year	3.51	(1.86)					1.01	(0.01)				
Highest Postsecondary Institution Attended												
Two-year			2.85	(1.80)					3.37	(1.80)		
Four-year			3.44	(1.81)					6.78**	(2.68)		
Inter-Institution Attended												
Two-year only					0.33	(-1.80)					3.41	(1.82)
Four-year only					2.01	(0.82)					3.53	(1.37)
Two- and four-year attd					4.44*	(2.03)					8.01**	(2.82)
Economic and Academic Resources												
Mother's Highest Education[b]												
Some college, no BA	1.27	(0.54)	1.28	(0.56)	1.31	(0.61)	2.24	(1.96)	2.21	(1.89)	2.20	(1.88)
At least bachelor's	1.46	(0.69)	1.57	(0.81)	1.71	(0.96)	1.81	(1.09)	1.92	(1.20)	2.03	(1.28)
Academic Variables												
High school GPA	0.88	(-1.10)	0.91	(-0.87)	0.92	(-0.69)	0.90	(-0.92)	0.88	(-1.18)	0.88	(-1.17)
College prep program[c]	1.01	(0.02)	1.10	(0.19)	1.15	(0.29)	1.34	(0.69)	1.07	(0.14)	1.15	(0.30)
Demographic and Other Life Course Variables[d]												
White	2.55	(1.76)	2.21	(1.50)	2.14	(1.44)	1.12	(0.26)	1.20	(0.40)	1.17	(0.34)
Female	1.09	(0.22)	1.06	(0.15)	1.06	(0.15)	1.71	(1.46)	2.05	(1.89)	2.09	(-1.93)
Married	1.44	(0.74)	1.29	(0.53)	1.24	(0.24)	0.77	(-0.64)	0.79	(-0.56)	0.77	(-0.61)
Kid(s)	1.12	(0.25)	1.22	(0.45)	1.19	(0.39)	0.92	(-0.21)	0.85	(-0.39)	0.83	(-0.43)
Wald Statistic	*$X^2(df=30)=$ 407.66****		*$X^2(df=30)=$ 413.55****		*$X^2(df=33)=$ 421.19****		*$X^2(df=30)=$ 145.16****		*$X^2(df=30)=$ 210.91****		*$X^2(df=33)=$ 218.43****	
Pseudo-R^2	*0.36*		*0.36*		*0.37*		*0.18*		*0.26*		*0.27*	

Notes. Reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Chapter 5

Conclusions

When Burton Clark revisited his original cooling out conception in 1980, he found that it was still as relevant in 1980 as it had been in 1960. He also pointed out that so long as there is a mismatch between culturally encouraged ambitions on one hand and limited ability and means on the other, the need for this function will remain. He further noted that this need is particularly endemic to democratic societies. Clark's bottom line was that if community colleges don't mange the problem, "someone" (i.e., some other societal institution) will have to. At this point, Clark turns to a discussion of the various alternatives (and their limitations), from pre-selection and open failure models out of line with the American way to risky guarantees of graduation and moving the "problem" to another type of college. In the end, he reinforces his original cooling out conception, not so much as a critique of community colleges (as many of those who followed him have done) but as a means of pointing to the necessity of this role in modern society. To the extent that this function is more evenly distributed among different institutional types today than it has been in the past, what are the implications for theory, research, and policy?

In the half century since Clark initially introduced his cooling out conception the conversation in higher education has changed from one focused on access to one focused on completion and learning outcomes (Morris 2013). This has happened in no small part due to the opening up of higher education to women, minorities, first-generation attenders, and other nontraditional student populations. These changes have led some scholars to point out that we have come full circle - nontraditional students are now the majority of postsecondary education enrollments (Deil-Amen 2012). Women have long since passed men in terms of both access and completion (Buchmann and DiPrete 2006; Jacobs 1996). This is particularly dramatic among

American undergraduates, particularly at liberal arts colleges and community colleges (Reed 2013a). Racial, economic, and other gaps favoring more traditional student populations remain, but the overwhelming empirical evidence suggests that in a very short period of time, historically speaking, community colleges have opened up the doors to higher education in ways only dreamed of by their early leaders (Cohen and Brawer 2008).

Why then the focus on educational expectations? Understanding the change and persistence in educational expectations and how these shifts do and do not intersect with institutional attendance, socioeconomic and academic resources, and key demographic and other life course transitions helps us connect the dots between the access and completion storylines. And until recently, this conversation was largely limited to examining educational expectations in the high school years only. This study builds on a growing body of research that suggests accounting for the change and persistence in educational expectations *beyond* high school and over longer portions of the life course is key to understanding the mechanisms at play in completion (Alexander et al. 2008; Andres et al. 2007; Attewell and Lavin 2007; Bozick et al. 2010; Johnson and Reynolds 2013). Importantly, it furthers this research by focusing on the role of the two-year sector in predicting the change and persistence of postsecondary expectation trajectories.

I started with the proposition that cooling out is not limited to community colleges. And, further, that at least for some students, changing educational expectations move in the opposite direction assumed in traditional explanations, which have historically predicted a downward leveling of ambition vis-à-vis the community college experience. As summarized in Table 5.1, I find support for this hypothesis. Cooling out also happens in the four-year sector, though certainly not to the degree that it occurs in the two-year sector. By late adulthood, about 11

percent of four-year only attenders and 23 percent of two-year only attenders had cooled out. What stands out far more, however, is the degree to which warming up outpaces cooling out as a phenomenon within both sectors. Over the same period, 21 percent of four-year only attenders and 40 percent of two-year attenders had warmed up. And, these figures are among youth who had not completed their bachelor's degree within the normative timeframe of six years after their senior year of high school. Taken together, this suggests generally optimistic and resilient postsecondary education trajectories even among those youth for whom a bachelor's degree may seem a "reach," given they haven't completed it in the prescribed timeframe.

These late adulthood findings about the proportion of cooling out, warming up, and holding steady (be it high or low) of educational expectations among YDS youth tell a slightly different story than when only early adulthood is considered. Had I limited my study to the analytic time-frame used to construct college completion rates, only 4 percent of four-year only attenders and 20 percent (or one in five) of two-year attenders would have cooled out. Similarly, only 3 percent of four-year only attenders and 20 percent of two-year only attenders would have warmed up.

The story gets really interesting, however, when I add "inter-institutional attenders" to the mix. Inter-institutional attenders are students who report attending both two- and four-year institutions over their transition to adulthood. Historically, this group has been soaked up in other categories, most commonly as four-year attenders when institutional attendance is measured by highest institution attended. Among inter-institutional attenders, 11 percent had cooled out and 44 percent had warmed up by late adulthood, making them far more similar to four-year only attenders in terms of cooling out and two-year only attenders in terms of warming up. Had these inter-institutional attenders been soaked up in a four-year category, the proportion of cooling out

among four-year attenders would have remained virtually unchanged (dropping by half a percentage point) while the proportion of warming up with have been substantial (37 percent instead of the actual 21 percent for four-year only attenders). While it was not possible to disentangle all the varied pathways within the inter-institutional attender category, these figures suggest more attention needs to be paid to this growing group of students. In fact, by late adulthood, the proportion of students attending only two-year (31 percent), only four-year (28 percent), or both two- and four-year (29 percent) institutions over the transition to adulthood had reached near parity, with those not attending any postsecondary education lagging behind at just 11 percent of the population.[5]

5.1. Implications for Theory, Research, and Policy

Much of what has happened within the two-year sector and how it intersects in the lives of contemporary youth does not fit with many of the early, dire predictions about its future, nor has what's happened fit with the original design either. New theory is needed to help understand these phenomena and to guide future research on community colleges and their students, as well as to inform local, state, and national policymaking impacting community colleges and their stakeholders.

In Chapter 2, I introduced "Ubiquitous U," "Here, There, and Everywhere," and "Mini-Harvards?" as new analytical conceptions for understanding the sheer ubiquity of the two-year sector, shifts in the attendance patterns and expectations of contemporary youth, and the growing strength of the academic model. These institutional shifts, together with the individual-level shifts from cooling out to more warming up and holding steady of educational expectations well into adulthood even for those who have not completed a bachelor's degree in the normative

[5] These figures are based on the full sample of youth from Chapter 3, without the completion restrictions used in Chapter 4.

timeframe, suggest other forces are at play. What is it, beyond the institution, beyond family, beyond academic ability that leads to such resiliency in postsecondary educational expectations so far into adulthood for contemporary youth?

Dave Baker's *The Schooled Society: The Educational Transformation of Global Culture* (in print) explores how the expansion of education has itself created revolutionary changes in our society. Though speaking to education as an institution more broadly, applying this explanation to what has happened within the community college sector over the past century and half proves illuminating. With roughly half of bachelor's degree earners in the United States now attending a community college at some point along their educational path, the "stigma" once attached to attending a community college has eroded. We also see the emergence of a different way of "thinking" about community colleges. I recently read a blog post from a leading community college blogger teasing out the implications of using citizenship participation rates to measure the effectiveness of community colleges, perhaps as a supplement to or even replacement to existing accountability measures such as graduation rates, employment rates at graduation, transfer rates, and success in addressing racial gaps in student success (Reed 2013a). Granted this has not happened yet, but it illustrates the point that like their four-year counterparts, community colleges are interested in more than the instrumental value of education. When institutional leaders, staff, and faculty hold these values, they pass them along to their students, and when these students soak in these values, they pass them on to their children. For example, Attewell and Lavin (2007) follow a cohort of women who first-attended community colleges in the City University of New York system and then via a change to CUNY's admissions policy were able to attend four-years (this was in the late 60s/70s before such articulation agreements were nearly universal). Following up with these women 30 years later, they found that half of the women

who ultimately attended four-years would not have had it not been for the policy change. They also found that those who did go on were from historically disadvantaged groups. Further, these women passed the torch on to their kids, as evidenced in increased standardized test scores and increased rates of college enrollment. Attewell and Lavin content that this happens through a variety of mechanisms including cognitive stimulation in the home, trips to museums and libraries, participation in networks, parental involvement in schools, parents educational expectations, more stable family lives, private school attendance, and consistent church attendance. These trends are not to say community colleges have ceased to provide more traditional vocational education (they haven't), but rather to suggest that placing a disproportionate amount of attention on these functions misses the larger point: community colleges are the point of entry into higher education for the majority of contemporary youth (NSC Research Center 2012; Reed 2012; Snyder and Dillow 2012).

Do these newer theoretical frameworks prove helpful in guiding research on community college students and policies impacting community colleges as institutions? Critics of community colleges say these institutions aren't doing enough to ensure students complete some form of credential, be it from within the two-year sector or through successful transfer and completion at a four-year institution (Bowen, Chingos, and McPherson 2009). Alternately, advocates are quick to critique conventional measures of completion such as graduation and completion rates, arguing they don't account for the varied demographics, goals, and lives of community college students, even with the recent improvements via the U.S. Department of Education's Committee on Measures of Student Success (Attewell and Lavin 2007; Bailey 2012; Cohen and Brawer 2008).

Particularly problematic to this discussion is the fact that, with few exceptions, the current debate and related research is based on an assumption of a "linear" pathway from high school, either into the world of work or postsecondary education, and into family formation. Yet, on-the-ground realities suggest otherwise: today's community college students, and increasingly their four-year counterparts, are here, there, and everywhere. Student flow patterns between two- and four-year institutions have become so complicated that analysts have created a veritable new vernacular in an attempt to deal with the challenges these shifts pose for traditional status attainment models. There are double-dippers, swirlers, lateral transfers, and reverse transfers, to mention but a few (Kalogrides and Grodsky 2011; see McCormick 2003 for a full review). Far from the traditional view of one-way transfer from two- to four-year institution, many contemporary college-age students attend multiple postsecondary institutions over the course of their transition to adulthood, sometimes simultaneously (Adelman 2004, 2005, 2006; Goldrick-Rab 2006).

Given these trends, does the current focus on completions make sense? The tenets of the current College Completion Agenda are best presented by the mission of the national nonprofit, Complete College America (CCA). CCA was established in 2009 on the heels of President Obama's Address to a Joint Session of Congress in February calling for America to again have the highest proportion of college graduates in the world by 2020 (The White House 2009). CCA's central mission is to "work with states to significantly increase the number of Americans with quality career certificates or college degrees and to close attainment gaps for traditionally underrepresented populations" (Complete College America Website 2013). The U.S. Department of Education has also put forth resources to help colleges and states increase their completion rates (U.S. Department of Education 2011b).The overarching goal of the governmental and non-

governmental backed push for completions is to increase graduation and transfer rates, especially at community colleges. On one hand, such calls for more education make a great deal of sense and are greeted with open arms by the public and policymakers alike. Indeed, given what we know about the host of economic and non-economic benefits arising from higher levels of educational attainment at the individual- and societal-levels, arguments against the push for more college-level completions are hard to come by (see J. E. Rosenbaum and J. Rosenbaum 2012:200; J. E. Rosenbaum 2001, 2011 for an alternative view). Yet, as with any policy, it is important to carefully consider the assumptions on which such policies are made and to fully examine the possibility of unintended consequences of such policy interventions, particularly ones which largely represent an unfunded mandate. Insomuch as the current push is based on assumptions of a normative college completion timeframe of four to six years for contemporary youth and of students as falling neatly into two- and four-year buckets, and all evidence suggests that it is, what might be the unintended consequences?

5.2. Directions for Future Research

In closing, I return to the study limitations discussed in Chapter 3 and consider potential directions for future research on the intersection of postsecondary education trajectories, institutional attendance, family background, and academic factors for students passing through the community college. This study suggests more "warming up" than "cooling out" among contemporary community college students in St. Paul, Minnesota and in so doing builds on similar evidence from Karl Alexander, Robert Bozick, and Doris Entwisle, based on longitudinal data from youth in Baltimore, Maryland, and from Monica Johnson and John Reynolds on a national cohort of youth based on the high school senior classes of 1987 to 1990. To date no one has asked these important questions at the national level for more recent cohorts. Owing to our

dominant four-year ideology, national longitudinal studies of contemporary youth fail to continue asking about educational expectations throughout the transition to adulthood and instead stop asking this after the four- to six- year point, assuming students know their educational trajectory by then. Yet, for many youth, especially those from socioeconomically disadvantaged backgrounds, their (albeit looser) connections to educational institutions tend to persist for longer periods of the life course. The Educational Longitudinal Study of 2002 (ELS) represents a noteworthy exception. ELS' fieldworkers are currently collecting the final wave of data from a nationally representative cohort of youth and have included questions about youths continued educational expectations eight years out of high school. This data presents a great opportunity to look at the educational expectations of youth across the country, and to more specifically explore the implications by social class and race/ethnicity. It would also allow for a more nuanced exploration of within-group heterogeneity than was allowed here due to small sample sizes. For example, one "inter-institutional attender" may have started at a four-year out of high school and reverse transferred to a two-year for a few years before returning to their initial starting point in the four-year sector, while still another started and ended their degree at the same four-year university, taking courses at their local community college when home for the summer. What are the implications of these attendance pathways on the change and persistence in educational expectations and, ultimately, on completion? Also, with respect to education trajectories, what distinguishes individuals who warm up and stay warmed up versus those who oscillate back and forth in terms of whether or not they expect a bachelor's degree? Similarly, what are the distinguishing traits and implications of heterogeneity within the holding steady high trajectory of a non-trivial proportion of warming up to post-baccalaureate aspirations?

Finally, more research is needed about the macro-level features of the community college not anticipated in earlier theoretical explanations of the role of community colleges in students' lives. While my dissertation identifies trends such as dormitories on two-year campuses, community college baccalaureate awards, changing faculty roles, stratification within the community college, and the development of articulation agreements between community colleges and four-year institutions as evidence of a changing institutional form, these should be empirically tested in future research. For example, what is the role of community college faculty in educational stratification? The conventional view in the sociological literature is that of a highly stratified higher education system, one where stratification extends to the professorate through closed social interaction between higher and lower status groups and social reproduction (e.g., high-tier Ph.D. students end up teaching at high-tier colleges and universities). No one to date has expanded this argument to consider what happens at the "opposite" end of the educational spectrum. Do community college faculty with PhDs increase intercourse between higher and lower status groups? How has this changed over time and in different areas (i.e., regionally, levels of urbanicity)? While projects like this focus on changes within the community college professoriate, taken together with national-level, micro-level analysis of student trajectories through the community college and similar projects on other macro-level shifts, this research represents a much needed update to the scholarly literature on stratification within higher education.

These are just a handful of the many questions awaiting further research. In the meantime, this dissertation represents an update to the scholarly literature on stratification within higher education. It offers new analytical conceptions for understanding the role of the community college in modern society. Further, it acknowledges the increasing importance of

exploring the complex, non-linear education pathways of today's students in order to understand their varied postsecondary trajectories.

Table 5.1. Summary of Key Findings

Macro-Structural Analysis	
Transforming Trends within the Two-Year Sector	(1) Ubiquitous U. The sector has expanded to the point it has become part of our normative understanding of postsecondary education. (2) Here, There, and Everywhere. Contemporary youth do not travel through community colleges in a linear fashion, nor do they always start there, two-year institutions are part of the higher education social safety net. (3) Mini-Harvards?. Community colleges increasingly "act" like their four-year institutional counterparts – erecting dormitories, funding honor's programs, hiring PhD faculty, and coordinating vocational and academic articulation agreements.
Micro-level Alternative Hypotheses	Results
(1) Cooling out is not limited to community colleges and, at least for some students, the two-year sector acts in the opposite direction assumed in these theories;	• By late adulthood, about 11 percent of four-year only attenders had cooled out, compared to 23 percent of two-year only attenders (Table 4.3). • In the same time frame, about 21 percent of four-year only attenders had warmed up, as had 40 percent of two-year only attenders (Table 4.3).
(2) Limiting our study of bachelor's degree expectations to the traditional marker of four- to six-years from high school is not sufficient for understanding the intersection of educational expectations, institutional sorting, socioeconomic status, and academic factors in the lives of contemporary cohorts of youth;	• Within six-years of high school, only 4 percent of four-year only attenders had cooled out, compared to 20 percent of two-year only attenders (Table 4.1). • Within six-years of high school, only 3 percent of four-year only attenders had warmed up, as had 20 percent of two-year only attenders (Table 4.1).
(3) The two dominant classifications for postsecondary institutional attendance in sociological and educational research (current institution attended and highest institution attended) miss a new category of students who attend two- and four-year institutions in a wide array of patterns (i.e., inter-institutional attenders).	• Among inter-institutional attenders, 11 percent had cooled out and 44 percent had warmed up by late adulthood, making them far more similar to four-year only attenders in terms of cooling out and two-year only attenders in terms of warming up (Table 4.3). • With inter-institutional attendance accounted for, there is some support for Clark's cooling out hypothesis, Brint and Karabel's diversion hypothesis, and for Rosenbaum's "college-for-all" thesis, at least when comparing those at the margins of changing expectations (Table 4.6), but not when comparing those at opposite ends of the expectation spectrum (Table 4.7). • Inter-institutional attendance is the distinguishing factor between youth at risk of warming up versus cooling out. This is a new construct, one worthy of more research and theorizing.

Appendix

Additional Comparisons of Bachelor's Degree Expectation Trajectories in Various Stages of Adulthood and with Different Measures of Postsecondary Educational Attendance

Table A.1. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Early Adulthood with Current Institution Attended (N=476)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[(a)]										
Some college, no bachelor's	1.81	(1.47)	1.29	(0.61)	1.64	(1.21)	1.40	(0.84)	1.11	(0.27)
At least bachelor's	4.87*	(2.57)	1.29	(0.61)	1.29	(0.61)	3.80*	(2.14)	2.60	(1.54)
Academic Orientation in High School										
High school GPA	1.41**	(3.27)	1.16	(1.35)	1.02	(0.19)	1.23	(1.94)	1.39**	(3.26)
College preparatory program[(b)]	7.52***	(4.08)	2.24	(1.87)	2.24*	(1.96)	3.35*	(2.32)	3.32*	(2.41)
Postsecondary Education[(c)]										
Currently Attending										
Two-year	3.06**	(2.58)	0.73	(-0.72)	1.78	(1.32)	4.18***	(3.49)	1.72	(1.32)
Four-year	3.37	(0.03)	7.11***	(4.01)	24.94***	(5.81)	4.73	(0.03)	1.35	(0.02)
Demographic and Other Life Course Variables[(d)]										
White	0.35*	(-2.20)	0.38	(-1.87)	0.96	(-0.04)	0.92	(-0.15)	0.36*	(-2.31)
Female	0.72	(-0.87)	0.95	(-0.15)	1.03	(0.09)	0.76	(-0.73)	0.70	(-1.02)
Married	1.15	(0.29)	0.97	(-0.06)	1.40	(0.71)	1.18	(0.37)	0.82	(-0.44)
Kid(s)	0.23***	(-3.26)	0.33*	(-2.40)	0.37*	(-2.21)	0.70	(-0.86)	0.63	(-1.21)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=407.66***; Pseudo-R^2=0.36. * p < .05, ** p < .01, *** p < .001.

Table A.2. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Early Adulthood with Highest Postsecondary Institution Attended (N=476)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	0.28*	(-2.51)	1.31	(0.65)	1.68	(1.27)	1.28	(0.61)	1.00	(0.00)
At least bachelor's	5.15*	(2.52)	1.35	(0.65)	2.12	(1.56)	3.80*	(2.06)	2.43	(1.37)
Academic Orientation in HS										
High school GPA	1.49***	(3.49)	1.17	(1.46)	1.06	(0.51)	1.28*	(2.22)	1.41**	(3.28)
College preparatory program[b]	7.45***	(3.82)	2.47*	(2.06)	2.70*	(2.35)	3.02*	(2.03)	2.75*	(1.98)
Postsecondary Education[c]										
Highest Postsecondary Institution Attended										
Two-year	5.72**	(2.90)	1.09	(0.13)	3.12	(1.85)	5.23**	(3.07)	1.84	(1.53)
Four-year	572.49***	(5.50)	7.31**	(2.69)	25.12***	(5.08)	78.36**	(3.75)	22.79**	(2.81)
Demographic and Other Life Course Variables[d]										
White	0.28*	(-2.51)	0.40	(-1.78)	0.88	(-0.30)	0.70	(-0.66)	0.31*	(-2.52)
Female	0.64	(-1.13)	0.95	(-0.15)	1.00	(0.01)	0.67	(-1.01)	0.63	(-1.24)
Married	0.88	(-0.26)	0.77	(-0.57)	0.99	(-0.02)	1.14	(0.30)	0.88	(-0.27)
Kid(s)	0.32**	(-2.44)	0.35	(-2.24)	0.43	(-1.83)	0.90	(-0.25)	0.74	(-0.78)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=413.55***; Pseudo-R^2=0.36. * p < .05, ** p < .01, *** p < .001.

Table A.3. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Early Adulthood with Inter-Institutional Attendance (N=476)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	1.64	(1.18)	1.26	(0.54)	1.64	(1.21)	1.31	(0.65)	1.00	(0.01)
At least bachelor's	4.70*	(2.38)	1.13	(0.25)	1.92	(1.33)	4.17*	(2.20)	2.44	(1.38)
Academic Orientation in HS										
High school GPA	1.46**	(3.29)	1.12	(1.02)	1.03	(0.29)	1.31*	(2.38)	1.42***	(3.28)
College preparatory program[b]	7.08***	(3.73)	2.20	(1.78)	2.53	(2.18)	3.22*	(2.15)	2.80*	(2.01)
Postsecondary Education[c]										
Inter-Institution Attended										
Two-year only	5.52**	(2.88)	1.04	(0.05)	2.99	(1.80)	5.33**	(3.09)	1.85	(1.54)
Four-year only	238.03***	(4.71)	16.09***	(3.29)	32.41***	(4.93)	14.79*	(2.16)	7.34	(1.71)
Two- and four-year attendance	1.14	(0.03)	4.26	(1.92)	18.89***	(4.26)	2.68	(0.03)	6.04	(0.03)
Demographic and Other Life Course Variables[d]										
White	0.29*	(-2.44)	0.42	(-1.64)	0.91	(-0.21)	0.68	(-0.70)	0.32*	(-2.52)
Female	0.64	(-1.11)	0.94	(-0.16)	0.99	(-0.01)	0.68	(-0.96)	0.64	(-1.20)
Married	0.92	(-0.16)	0.86	(-0.32)	1.06	(0.13)	1.07	(0.15)	0.87	(-0.31)
Kid(s)	0.33*	(-2.36)	0.38*	(-2.10)	0.45*	(-1.75)	0.88	(-0.30)	0.74	(-0.76)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=33)=421.19***; Pseudo-R^2=0.37. * p < .05, ** p < .01, *** p < .001.

Table A.4. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood I with Current Institution Attended (N=298)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	4.71***	(3.88)	2.54*	(2.31)	1.85	(1.20)	1.85	(1.60)	2.54	(1.92)
At least bachelor's	7.84***	(3.76)	3.77**	(2.74)	6.14*	(2.17)	2.08	(1.26)	1.28	(0.28)
Academic Orientation in HS										
High school GPA	1.26*	(2.14)	1.13	(1.17)	1.23	(1.48)	1.11	(1.04)	1.02	(0.15)
College preparatory program[b]	5.32***	(3.88)	2.02	(1.78)	1.73	(1.01)	2.63*	(2.18)	3.09*	(1.98)
Postsecondary Education[c]										
Currently Attending										
Two-year only	1.76	(0.88)	0.77	(-0.44)	1.03	(0.04)	2.28	(1.49)	1.71	(0.72)
Four-year only	1.19	(0.02)	1.17	(0.32)	4.57	(1.40)	1.02	(0.02)	2.61	(0.02)
Demographic and Other Life Course Variables[d]										
White	0.60	(-1.01)	1.51	(0.94)	1.03	(0.06)	0.40*	(-2.06)	0.58	(-0.90)
Female	0.93	(-0.19)	0.64	(-1.24)	0.75	(-0.59)	1.47	(1.07)	1.25	(0.46)
Cohabitating/married	1.54	(1.01)	1.90	(1.53)	2.32	(1.52)	0.81	(-0.52)	0.67	(-0.78)
Kid(s)	0.40*	(-2.19)	0.63	(-1.16)	0.55	(-1.09)	0.64	(-1.07)	0.73	(-0.57)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=133.81***; Pseudo-R^2=0.17. * p < .05, ** p < .01, *** p < .001.

Table A.5. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood I with Highest Postsecondary Institution Attended (N=298)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	3.21*	(2.54)	2.03	(1.65)	1.42	(0.65)	1.58	(1.13)	2.26	(1.62)
At least bachelor's	4.62*	(2.74)	2.67*	(1.99)	4.72	(1.82)	1.73	(0.90)	0.98	(-0.02)
Academic Orientation in HS										
High school GPA	1.32*	(2.24)	1.16	(1.30)	1.26	(1.56)	1.14	(1.23)	1.04	(0.32)
College preparatory program[b]	4.00***	(2.79)	1.70	(1.29)	1.26	(0.41)	2.36	(1.80)	3.17	(1.94)
Postsecondary Education[c]										
Highest Postsecondary Institution Attended										
Two-year	4.09**	(2.92)	1.18	(0.34)	1.42	(0.59)	3.47**	(3.17)	2.89*	(2.08)
Four-year	3.94	(0.04)	4.02**	(3.10)	9.53***	(3.30)	9.82	(0.03)	4.14	(0.03)
Demographic and Other Life Course Variables[d]										
White	0.88	(-0.21)	1.86	(1.30)	0.83	(-0.36)	0.48	(-1.54)	0.68	(-0.62)
Female	1.06	(0.14)	0.69	(-0.96)	1.42	(0.65)	1.54	(1.14)	1.28	(0.50)
Cohabitating/married	1.77	(1.15)	2.19	(1.73)	2.84	(1.80)	0.81	(-0.51)	0.62	(-0.89)
Kid(s)	0.40*	(-1.98)	0.62	(-1.12)	0.55	(-1.06)	0.64	(-1.05)	0.73	(-0.59)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=198.00***; Pseudo-R^2=0.29. * p < .05, ** p < .01, *** p < .001.

Table A.6. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood I with Inter-Institutional Attendance (N=298)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	3.22*	(2.55)	2.04	(1.67)	1.43	(0.66)	1.58	(1.13)	2.26	(1.62)
At least bachelor's	4.48*	(2.48)	2.68	(2.00)	4.72	(1.82)	1.73	(0.90)	0.99	(-0.02)
Academic Orientation in HS										
High school GPA	1.32*	(2.22)	1.15	(1.27)	1.26	(1.54)	1.14	(1.24)	1.04	(0.31)
College preparatory program[b]	3.95**	(2.76)	1.65*	(1.22)	1.25	(0.38)	2.39	(1.82)	3.17	(1.94)
Postsecondary Education[c]										
Inter-Institution Attended										
Two-year only	4.09**	(2.92)	1.18	(0.33)	1.41	(0.59)	3.47**	(3.17)	2.89*	(2.08)
Four-year only	8.35	(0.02)	4.80**	(2.94)	10.33**	(2.69)	1.74	(0.02)	8.09	(0.02)
Two- and four-year attendance	1.05	(0.02)	3.30*	(2.23)	8.65*	(2.47)	3.18	(0.02)	1.21	(0.02)
Demographic and Other Life Course Variables[d]										
White	0.93	(-0.13)	1.97	(1.39)	1.36	(0.45)	0.47	(-1.57)	0.68	(-0.61)
Female	1.05	(0.11)	0.67	(-1.02)	0.82	(-0.39)	1.55	(1.16)	1.28	(0.51)
Cohabitating/married	1.75	(1.13)	2.16	(1.71)	2.81	(1.79)	0.81	(-0.50)	0.62	(-0.90)
Kid(s)	0.40*	(-1.98)	0.62	(-1.12)	0.55	(-1.05)	0.64	(-1.05)	0.73	(-0.58)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=33)=198.42***; Pseudo-R^2=0.25. * p < .05, ** p < .01, *** p < .001.

Table A.7. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood II with Current Institution Attended (N=294)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	4.15**	(2.94)	1.73	(1.38)	3.91**	(2.86)	2.39*	(2.19)	1.06	(0.13)
At least bachelor's	15.64**	(3.18)	2.41	(1.92)	4.36*	(2.56)	6.50*	(2.27)	3.59	(1.45)
Academic Orientation in HS										
High school GPA	1.47**	(2.95)	1.23	(1.91)	1.11	(0.81)	1.20	(1.72)	1.32*	(2.35)
College preparatory program[b]	14.65***	(3.84)	1.93	(1.72)	2.59*	(2.03)	7.61**	(3.05)	5.66*	(2.46)
Postsecondary Education[c]										
Currently Attending										
Two-year only	0.88	(-0.15)	0.49	(-0.99)	0.82	(-0.24)	1.78	(0.94)	1.07	(0.10)
Four-year only	6.64	(0.02)	1.47	(0.83)	1.49	(0.01)	4.51	(0.02)	0.45	(-0.00)
Demographic and Other Life Course Variables[d]										
White	0.20*	(-2.45)	0.78	(-0.57)	0.88	(-0.25)	0.26*	(-2.36)	0.23*	(-2.40)
Female	0.65	(-0.96)	0.60	(-1.43)	1.03	(0.07)	1.08	(0.21)	0.63	(-1.10)
Cohabitating/married	1.67	(1.00)	1.81	(1.46)	1.39	(0.67)	0.92	(-0.19)	1.20	(0.40)
Kid(s)	0.32*	(-2.22)	0.60	(-1.36)	0.55	(-1.32)	0.54	(-1.37)	0.59	(-1.08)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=145.16***; Pseudo-R^2=0.18. * p < .05, ** p < .01, *** p < .001.

Table A.8. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood II with Highest Postsecondary Institution Attended (N=294)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	3.36*	(2.17)	1.65	(1.17)	3.64*	(2.49)	2.04	(1.66)	0.92	(-0.16)
At least bachelor's	9.72*	(2.43)	1.99	(1.46)	3.82*	(2.21)	4.89	(1.85)	2.54	(1.02)
Academic Orientation in HS										
High school GPA	1.43*	(2.39)	1.20	(1.68)	1.05	(0.35)	1.19	(1.47)	1.36*	(2.38)
College preparatory program[b]	6.16*	(2.28)	1.30	(0.65)	1.38	(0.63)	4.75*	(2.11)	4.45*	(1.98)
Postsecondary Education[c]										
Highest Postsecondary Institution Attended										
Two-year	4.39	(0.02)	6.41	(0.01)	2.16	(0.02)	6.85**	(3.04)	2.04	(1.36)
Four-year	6.68	(0.02)	4.53	(0.02)	3.07	(0.02)	147.58***	(4.24)	21.78**	(2.68)
Demographic and Other Life Course Variables[d]										
White	0.26	(-1.89)	1.01	(0.03)	1.22	(0.35)	0.26*	(-2.25)	0.21*	(-2.46)
Female	0.95	(-0.10)	0.78	(-0.66)	1.60	(1.03)	1.21	(0.45)	0.59	(-1.19)
Cohabitating/married	1.80	(0.97)	1.86	(1.42)	1.46	(0.70)	0.97	(-0.07)	1.23	(0.42)
Kid(s)	0.33	(-1.89)	0.61	(-1.20)	0.52	(-1.30)	0.54	(-1.27)	0.63	(-0.92)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=30)=210.91***; Pseudo-R^2=0.26. * p < .05, ** p < .01, *** p < .001.

Table A.9. Multinomial Logistic Regression Models Predicting Postsecondary Expectation Trajectories in Late Adulthood II with Inter-Institutional Attendance (N=294)

	Stable High vs. Stable Low		Stable High vs. Not Cooled Out		Stable High vs. Cooled Out		Not Cooled Out vs. Stable Low		Cooled Out vs. Stable Low	
	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)	odds ratio	(z-score)
Mother's Highest Education[a]										
Some college, no bachelor's	3.25*	(2.10)	1.63	(1.14)	3.59*	(2.46)	1.99	(1.59)	0.90	(-0.21)
At least bachelor's	8.95*	(2.33)	1.80	(1.22)	3.64*	(2.11)	4.99	(1.86)	2.46	(0.98)
Academic Orientation in HS										
High school GPA	1.42*	(2.34)	1.19	(1.64)	1.05	(0.33)	1.19	(1.44)	1.36*	(2.36)
College preparatory program[b]	5.90*	(2.21)	1.12	(0.26)	1.28	(0.48)	5.29*	(2.24)	4.60*	(2.02)
Postsecondary Education[c]										
Inter-Institution Attended										
Two-year only	8.67	(0.01)	1.24	(0.01)	4.24	(0.01)	6.98**	(3.05)	2.05	(1.37)
Four-year only	2.56	(0.01)	1.88	(0.01)	6.62	(0.01)	13.65*	(2.01)	3.87	(1.04)
Two- and four-year attendance	3.84	(0.02)	7.43	(0.01)	5.95	(0.01)	5.17	(0.03)	6.46	(0.03)
Demographic and Other Life Course Variables[d]										
White	0.28	(-1.78)	1.10	(0.20)	1.28	(0.44)	0.25*	(-2.26)	0.22*	(-2.43)
Female	0.98	(-0.03)	0.77	(-0.68)	1.61	(1.04)	1.27	(0.56)	0.61	(-1.11)
Cohabitating/married	1.69	(0.88)	1.88	(1.43)	1.45	(0.68)	0.90	(-0.22)	1.17	(0.32)
Kid(s)	0.35	(-1.77)	0.65	(-1.03)	0.54	(-1.20)	0.54	(-1.25)	0.65	(-0.87)

Notes: Reference categories for dummy variables include respondents who (a) have mothers with their highest education being high school or less; (b) were not enrolled in college preparatory programs in high school; (c) haven't attended any postsecondary education; and (d) are nonwhite, male, not married, and without any kids. Wald x^2(df=33)=218.43***; Pseudo-R^2=0.27. * p < .05, ** p < .01, *** p < .001.

Table A.10. Multinomial Logistic Regression Models Predicting Expectation Trajectories in Early Adulthood, Comparisons to a Collapsed Steady Group (High and Low) (N = 476)

	Model 1		Model 2	
	Cooling Out vs. Steady		Warming Up vs. Steady	
	odds ratio	(z-score)	odds ratio	(z-score)
Postsecondary Education[(a)]				
Two-year only	0.18	(-0.50)	1.25*	(2.43)
Four-year only	2.12***	(3.45)	1.26	(1.63)
Two- and four-year (inter-institutional)	0.98	(-1.79)	0.61	(-0.97)
Economic and Academic Resources				
Mother's Highest Education[(b)]				
Some college, no bachelor's	0.16	(-0.48)	0.07	(-0.20)
At least bachelor's	0.12	(-0.27)	0.39	(-0.88)
Academic Variables				
High school GPA	0.15	(-1.71)	0.05	(-0.53)
College preparatory program[(c)]	0.15	(-0.38)	0.06	(-0.15)
Demographic and Other Life Course Variables[(d)]				
White	0.65	(-1.84)	0.15	(-0.32)
Female	0.16	(-0.52)	0.13	(-0.39)
Married	0.10	(-0.25)	0.17	(-0.44)
Kid(s)	0.11	(-0.30)	0.34	(-0.91)

Notes: Reference categories for dummy variables include respondents who (a) haven't attended any postsecondary education ; (b) have mothers with their highest education being high school or less; (c) were not enrolled in college preparatory programs in high school; and (d) are nonwhite, male, not married, and without any kids. Wald Wald X^2 (df =22) = 71.77***; Pseudo-R^2 = 0.10; * p < 0.05, ** p < 0.01, *** p < 0.001.

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PUBLICATIONS

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2006 Dare to Excel Award, Prince George's Community College.
2005 U.S. Government Special Achievement Award ($700), U.S. Department of Commerce.
2004 U.S. Government Special Achievement Award ($500), U.S. Department of Commerce
2002 U.S. Government Special Achievement Award ($500), U.S. Department of Commerce.
1999 Amy R. Rextrew Award, University of Delaware.
1997 Women of Promise Award for Academic Excellence, University of Delaware.