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## TRACING THE TIMING OF “CAREER” ACQUISITION IN A CONTEMPORARY YOUTH COHORT\*

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### Abstract

Contemporary youth typically experience considerable floundering and uncertainty in their transition from school to work. This paper examines patterns of schooling and working during adolescence and the transition to adulthood that hasten or delay an important subjective marker of transition to adulthood: acquiring a job that is recognized as a “career.” We use Youth Development Study data, obtained from a prospective longitudinal study of 9<sup>th</sup> graders. Estimation of discrete-time logit models shows that adolescent work patterns during high school, as well as the cumulative investments they make in work and schooling in the years following, significantly influence this milestone. Time-varying predictors, including job characteristics and parenthood, also affect the process of movement into “careers”.

### Keywords

career; transition to adulthood; adolescent work; socioeconomic attainment

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In recent decades, globalization, economic restructuring, and rapid technological and occupational changes have made the successful transition from school to work more challenging for American youth as well as for those in other post-industrial societies. At the same time, the passage to adulthood has become increasingly prolonged and individualized (Shanahan, 2000). Young people extend their educations, delay family formation, and often postpone serious consideration of work and career until their schooling is near complete. We examine the factors that facilitate or impede youth’s progression toward jobs that are subjectively defined as “careers” in this potentially difficult context.

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## THE CHALLENGES OF CAREER ACQUISITION IN THE UNITED STATES

In the “new” American economy with its continuous technological change, rapid emergence and disappearance of occupations, overseas “outsourcing”, and organizational turbulence, youth are told to expect multiple occupational changes during the course of their working lives. In this context, even the concept of an enduring career may be threatened (Kerckhoff, 2002, 2003; Heinz, 2003). It may seem difficult, if not impossible, for teenagers to prepare themselves for the unforeseeable future labor market. Furthermore, many parents fear that undue focus on work during the adolescent years might lead to the sidestepping of college and the more favorable career prospects of college graduates. Young people, their parents, and teachers understand that “better jobs” go to youth with college educations (Schneider and Stevenson, 1999). In fact, up to ninety percent of high school seniors in the United States plan to go to college (Schneider and Stevenson, 1999); and about 70 percent succeed in entering two-year or four-year colleges following high school graduation. However, only about a third of entering college students who plan to earn a bachelor’s degree do so within four years; 56 percent achieve it within six years (U.S. Department of Education, 2004).

College graduates, and those who obtain postgraduate degrees, have the greatest opportunity, as they enter the labor force with a prized credential (Layard and Psacharopoulos, 1974; Faia, 1981; Collins, 1979; Spence, 1973; Arrow, 1973). This privileged stratum, constituting over a fourth of recent birth cohorts in the United States, have access to college and university placement services to help them find jobs. But those who enter the full-time labor force after leaving school are more typically high school graduates or GED recipients, college dropouts, or, less frequently, high school drop-outs. For such youth, the kinds of networks between employers and schools that exist in countries like Japan (Rosenbaum, et al. 1990) and Germany (Hamilton, 1990; DiPrete & McManus, 1996; Heinz, 1997) are notably absent. Without structural bridges between school and work, these youth must rely substantially on their own resources (Kerckhoff, 1995; Marshall, 1997; Mortimer and Krueger, 2000).

Rosenbaum and his colleagues (Rosenbaum 2001; Person, Rosenbaum, and Deil-Amen 2005) contend that employers in the United States rarely use academic signals when considering a job applicant, but rely instead upon visible indicators, such as age, about which they have predetermined judgments. With rare exception (Person et al., 2005), even community colleges with strong vocational focus provide little connection to employers in the local community. (Such connections occur, for example, when schools provide nominations for job positions and information about candidates that would otherwise be difficult to obtain, or when job-specific training in school precedes continued training in the workplace).

In his cross-national comparative analysis of the school-to-work transition, Kerckhoff (2003) emphasizes the close connection between vocationally-specific educational credentials and the acquisition of stable, full-time work. In the U.S., high school diplomas and Bachelor’s degrees provide little guidance as to what kinds of vocational skills a young person possesses, or what kinds of occupations they may be suited for. A long period of trial and error often ensues, as employers “take their chances” on youth who present little in the way of formal qualification for job openings, and youth move from job to job until they find work that is congruent with their interests, abilities, and needs. The school-to-work transition can be lengthy and unpredictable, as young people shift between jobs that may be quite similar to those held during high school (Kerckhoff, 2002), alternate school and work, and combine work and postsecondary education. Given the unsatisfactory character of their employment, many youth who have departed full-time schooling return sometime in the future to acquire further educational credentials.

The difficulties recent cohorts of young people face in finding good jobs with “career potential” have not gone unnoticed. The W.T. Grant Foundation’s highly publicized 1988 report, *The Forgotten Half* (referring to youth who did not go to college), showed that those in the 20–24 year age bracket, compared to their early 1970’s counterparts, were less able to find steady, well-paying jobs “with a future” and were more likely to have incomes below the poverty line. A decade later, the size of the “forgotten half” had shrunk due to higher college enrollments (Halperin, 1998) and economic prosperity. But still, 16 to 24 year old out-of-school youth were more likely to be experiencing difficulties in establishing themselves in the labor force (as indicated by unemployment, involuntary part-time work, or working full-time at a wage below the poverty level) in 1997 than in 1989.<sup>1</sup>

But despite these difficulties, the American system may be viewed as having certain advantages. For the privileged, the prolonged transition to adulthood enables a lengthy period of educational and occupational exploration (Arnett, 2000). It provides opportunities for “late bloomers” and new beginnings when initial forays into the labor market are unsatisfactory. The opportunities at this stage of life may even lead some youth to think of their prospects as quite open-ended, encouraging ambivalence about the acquisition of long-term “careers” and other stable commitments of adulthood (Hartmann and Swartz, 2007).

If young people decide, after leaving high school or after initially departing from college, that their qualifications are insufficient to obtain the careers they want, a vast array of post-secondary institutions beckons to them—including community colleges, public and private business and vocational schools, and degree programs on the Internet—in addition to traditional four-year colleges and universities. In fact, some researchers have marshaled evidence that adult labor market outcomes (in the late 20’s to mid 30’s) are unrelated to the stability of labor market experiences during the five-year period after leaving school (Gardecki and Neumark, 1998). The typical male high school graduate moves into a stable job (lasting 2–3 years or more) by his early twenties (Klerman and Karoly 1994). Further, voluntary mobility between jobs among young adults generally results in higher wages (Keith and McWilliams, 1999). Still, none of this research addresses youth’s movements into what they themselves consider “career” jobs.

## SUBJECTIVE CAREER ACQUISITION

Whereas sociologists generally focus on educational qualifications, full-time work, unemployment, wage rate, and occupation (Settersten, et al., 2005; see also Mortimer, Staff and Oesterle, 2003; Staff and Mortimer, 2007) as indicators of socioeconomic standing, this approach does not speak to youth’s own evaluations of the long-term prospects of their jobs. Because early labor market experience is often characterized by trial-and-error “floundering” between unrelated types of work, many young people make the distinction between “real jobs,” those that enable economic self-sufficiency, have long-term prospects, and “career potential,” and the shorter-term jobs they hold to support themselves as they attend school, pursue other objectives, or simply struggle to make ends meet while seeking more attractive options (Livingstone, 1998). Similarly, Huiras, Uggen, and McMorris (2000) distinguish between “career jobs” and “survival jobs,” and find that “career jobs” are associated with less employee deviance. They emphasize the greater “stake” youth have in “career” jobs—with more to lose, job loss is a greater risk.

The attainment of a “career job” may have special significance because of its relevance to becoming an adult. Research on the criteria young people use to decide whether a person is an

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<sup>1</sup>See also Corcoran and Matsudaira’s 2005 comparison of the prospects of two cohorts of youth who turned 20 in the 1970’s and 1980’s, based on the Panel Study of Income Dynamics (1968–1996), revealing a complex pattern of shifting economic prospects.

adult has pointed to the salience of individualistic achievements, especially financial independence (Arnett, 1997, 2001, 2003; Scheer and Palkovitz, 1994). Individual qualities and behaviors, such as personal responsibility and the capacity to make one's own decisions, are generally thought to be more crucial than role transitions, regardless of age, race, and historical period (Arnett 1994, 1997, 1998, 2001, 2003; Greene, Wheatley, and Alvada 1992). There is widespread consensus, however, on the importance of settling into a career (Arnett 2001). Career establishment is considered a necessary component of adulthood by close to one-third of respondents in Arnett's studies, placing it higher in importance than other traditionally-studied markers of adulthood, such as marriage, parenthood, and full-time employment.

This research thus considers the school-to-work transition from a social psychological perspective. We ask, at what point do youth begin thinking of their jobs as "careers," and what circumstances or experiences hasten or delay this evaluation? Using data from a long-term study following young people from the time of entry to high school (age 14–15) to their early thirties, we model the influence of key factors that could hasten or retard career acquisition.

## THE PROCESS OF MOVEMENT INTO "CAREERS"

Variation in the pathways from school to subjective career achievement is likely to be reflected in youth's own assessments of their jobs. As a result, the same jobs may be differentially evaluated as having "career potential" or not, depending on an individual's qualifications, social background, work values, and other personal characteristics (see, e.g., Newman, 1999). For more advantaged youth, a well-understood pathway to "career"-like jobs involves extensive investment in human capital through higher education, which leads, for the most successful, to Bachelor's or higher-level degrees (Staff and Mortimer, 2007). Career attainment is signified by the acquisition of professional or managerial positions, and is generally postponed until higher education is complete.

We hypothesize that a second pathway to a subjectively defined career occurs through the acquisition of human capital through early work experience. While sociologists generally view the first job *after* finishing school as the start of the socioeconomic career (with important exceptions, such as Entwisle, Alexander, and Olson, 2000), employment in the context of secondary education may be particularly important for vocational exploration and self-identified career acquisition (Mortimer, 2003). Although adolescents are concentrated in the retail and service sectors, usually in jobs that bear little resemblance to the kinds of work they expect to pursue as adults, such employment can be a source of generic skills about how to find and keep a job, how to conduct oneself in the workplace, and how to get along with co-workers, supervisors, and customers. Less frequently, adolescent part-time jobs provide work experiences that promote specific job skills and foster interest in particular kinds of adult work (Mortimer, 2003).

Whereas the effects of adolescent work intensity on educational performance and attainment have been well studied (Bachman and Schulenberg, 1993; Carr, Wright, and Brody, 1996; Marsh and Kleitman, 2005; Staff, Mortimer, and Uggen, 2004; Staff and Mortimer, 2007), little attention has been directed to the longer-term consequences of teenage labor force participation for career achievement. In the absence of occupationally-relevant educational certification, both young people and their prospective employers often look elsewhere for evidence regarding employability and competence, particularly to prior work experience. As a result, we expect that more "intensive" involvement in work during high school will be associated with more rapid movement into "career-like" jobs in the early years after leaving high school, whereas more moderate high school work, which promotes time management skills and post-secondary educational attainment (Staff and Mortimer, 2007), will delay career acquisition (Mortimer, 2003).

While the two pathways--through higher education (Kane and Rouse, 1995) and early labor force participation--both represent viable routes to a subjective career, they have quite different socioeconomic outcomes. Thus, the question as to whether early or later career acquisition is "good" depends on the resources and constraints young people face as they make the transition from school to work. For youth whose family resources, educational aspirations, and academic capacities make the successful pursuit of higher education less feasible, acquiring a self-identified career early on could constitute a much better alternative than drifting and "floundering" between unrelated jobs (Staff and Mortimer, 2003).

Youth's values and orientations as they look toward adulthood are likely to influence the routes they take toward careers. Clausen (1991) coined the term "planful competence" to highlight adolescents' active engagement in thinking about, gathering information for, and planning their futures. Some investigators (Warren and Lee, 2003; Mortimer, 2003; Staff and Mortimer, 2007) distinguish between adolescents whose primary orientation is toward education—high achieving youth who are engaged in school and expect that their long-term chances will be furthered most strongly by educational investment—and those who are primarily oriented to work, having little interest, or prior success, in school. Strong orientation to school will delay adolescents' movement toward "career" jobs; strong orientation toward work will hasten it.

In view of the prolonged character of the transition from school to work, what one does well after leaving high school has growing significance for long-term occupational prospects (Staff and Mortimer, 2003; Staff and Mortimer, 2007). Just as the relative investment in school and work during high school is likely to have consequences for "career" acquisition, the balance of education and work after high school deserves systematic scrutiny (Staff and Mortimer, 2007). Some youth invest heavily in post-secondary education, delaying careers but heightening prospects for eventual economic return and other elements of occupational success (Kane and Rouse, 1995). College attendance is usually combined with part-time work (Horn, Peter, and Rooney, 2002); less often, by full-time work. Post-secondary schooling, pursued alone or in combination with work, likely coincides with delayed movement into a "career-like" job; whereas full-time work in the absence of higher education is likely associated with more rapid career acquisition. Little is known about the implications of these different strategies—higher education in the absence of work, or accompanied by part-time or full-time work—for "career" establishment. Post-high school educational attainments include Associate's and BA/BS degree receipt, which could signal readiness for "career" jobs (Layard and Psacharopoulos, 1974; Faia, 1981; Collins, 1979; Spence, 1973; Arrow, 1973).

Youth who invest neither in education nor in work during the years after high school may be considered "idle," although they may be involved in other worthy activities, such as, full-time homemaking, parenthood, and/or unpaid volunteer work (Powers, 1994).. Because youth in this state are neither preparing for, nor moving toward, careers, with increasing time spent "idle," "career" acquisition is likely to be delayed. The time invested in the current job is another likely correlate of subjective career achievement; as full-time jobs will be seen as having more career potential. Part-time work in the absence of postsecondary education is expected to be associated with postponement of "career" acquisition to the extent that it reflects labor market difficulties or lack of commitment to a particular line of work.

In addition to post high school investments in schooling and work, the quality of post-secondary jobs must also be considered. On-the-job training often signifies placement on a career "ladder;" youth whose employers are investing in them by providing such training may be more likely to recognize their present jobs as "careers." Moreover, training is often associated with desirable job characteristics, such as increased wages (Lynch 1993), which are likely also to encourage recognition of a job as a "career." Earnings even increase the capacity to obtain



career-like jobs, as low wages and poverty create formidable barriers for career acquisition (Rankin 2003; Lambert 2003).

Young adults with dependent spouses and children have substantial economic incentive to stabilize their jobs and to view them as long-term careers. Family formation is a strong motivator to have a stable “career-like” job, especially for men who are the traditional “family providers” (Hakim, 2002; Witkowski and Leicht, 1995). Marriage and parenthood reduce the likelihood of young adult male exits from their jobs (Koenigsberg, Garet, and Rosenbaum, 1994). However, female single parents and married women who contribute substantially to their households’ incomes would also have interest in career-like work. It may be considered counter-normative, evoking various forms of social disapproval, for either men or women to pursue “survival type” jobs in the face of family responsibilities. We recognize that the relationship between family and work may be reciprocal (Frone, Russell and Cooper, 1992; Glass and Riley, 1998; Johnson and Mortimer, 2000); for example, attainment of a “career” job may be considered a signal of “readiness” for marriage or parenthood. Still, subjective career recognition in any given year would not influence the *prior accumulation* of months of marriage or parenthood.

Family background is strongly implicated in the status attainment process (Sewell and Hauser, 1975; Featherman, 1980; Kerckhoff, 1994) and, as noted earlier, more and less advantaged young people are also likely to progress toward subjective careers in distinctive ways. Families of higher socioeconomic status have more resources to enable their children to pursue higher education and thereby delay movement into “career-like” jobs. Parental socioeconomic level is therefore likely to delay “career” acquisition, as would parental educational expectations for a child. However, parents who have more educational credentials and higher occupational status also function as role models of high achieving adults and constitute good sources of social capital when their young adult children enter the full-time labor market. To the extent that they do so, higher family socioeconomic background could reduce floundering in the labor market, shortening the time to subjectively defined “careers.”

We also expect that a two-parent family of origin will facilitate “career” acquisition. Along with the many other benefits that facilitate attainment (Seltzer, 1994; Amato, 2000), adolescents in two-parent families have the advantage of two adults who can guide them as they encounter the challenges of the labor force. Furthermore, as a result of employer discrimination, minority youth and those who were born outside the United States (Perreira, Harris, and Lee, 2007) are likely to be delayed in their quest for a career. There is evidence that African-Americans, relative to whites, move more slowly towards jobs of higher occupational standing and are more likely to move down the occupational ladder (Miech, Eaton, and Liang, 2003; Maume, 2004; McBrier and Wilson 2004). Indeed, Lewis et al. (1998) hypothesize that difficulty in the school-to-work transition is more a product of an underprivileged background than any inherent problems of the system of transition itself.

Gender is also likely to influence career building at this time of life. Though most female adolescents expect to work and, in fact, value work highly, the male’s greater responsibility as family provider is still widely accepted (Johnson, Oesterle, and Mortimer, 2001). Despite high rates of female labor force participation, the continuing expectation that men will be the primary economic providers likely propels males into “career-like” jobs more quickly than females. We also recognize that gender could moderate the effects of various precursors to career, given the different (though increasingly convergent) character of the transition to adulthood for young men and women. For example, the presence of children may be especially important in hastening fathers’ career acquisition, while depressing that of mothers who have more responsibility for child care. Full-time work in the absence of school may also have differential significance for men and women. Males may be more likely to look to their full-time jobs as

long-term prospects and sources of economic provision for their families; many females may view them as more tentative and provisional pursuits, as they expect to “scale back” their work involvement as their family needs increase (Glass and Riley 1998; Dwyer 2004).

Finally, in assessing the process of “career” establishment, a foremost consideration is time. Moving from school into work, and specifically, into “career-like” jobs, is governed by the temporal constraints of social institutions and normative structures—for example, the time it takes to finish schooling, as well as age norms defining appropriate work behavior as youth grow older. This process is also affected by more subtle dynamics of vocational and other forms of maturation. As a result of a host of temporally-based processes, only some of which can be assessed in the present project, the likelihood of holding a job that one recognizes as a “career” is expected to increase with time.<sup>2</sup> Given that post-secondary investments may vary in importance depending on years since leaving high school, we investigate whether time conditions the effects of each type of work-school investment. Also, because the impacts of background characteristics can vary across the life course (Miech, Eaton, and Liang, 2003; Maume, 2004; McBrier and Wilson 2004), we explore whether time conditions the effects of social origins..

## DATA, MEASURES, AND METHODS

### DATA

The Youth Development Study (YDS) is a continuing prospective longitudinal study of 1,010 teenagers drawn from a greater metropolitan area of approximately 3 million residents. The YDS began in 1988 with a randomly selected sample of all ninth graders enrolled in the St. Paul Public School District in Minnesota. U.S. Census 1990 data indicate that this site was comparable to the nation as a whole with respect to several economic and social indicators (Mortimer 2003; see also Staff and Mortimer 2007). For example, per capita income in St. Paul (in 1989) was \$13,727, while in the nation at large it was \$14,420. With 12.4 percent of families below the poverty line in St. Paul, poverty was slightly more prevalent compared to the national average of 10 percent. The labor market in St. Paul, however, presented comparatively good employment opportunities, with relatively low unemployment (4.7 percent in 1990 vs. 5.5 percent in the U.S.) and a relatively high level of labor force participation (63 percent vs. 60 percent in the country at large). As a result, employment conditions for youth in the Twin Cities metropolitan area were quite good during the period in which the YDS participants were attending high school (Fall 1987 to Spring 1991). Although the YDS cannot address the impacts of teenage employment under more adverse conditions, for example, when there is a dearth of jobs for youth as in some inner cities (see Newman, 1996, 1999), or the special circumstances of working youth in rural areas (Elder and Conger, 2000), the employment context for young people in St. Paul is probably quite similar to those in many other mid-size cities across the country.

The YDS panel was surveyed annually from the ninth to twelfth grades in high school. Yearly questionnaires, administered in school, included a large battery of items tapping early experiences in work, achievement-relevant attitudes, school performance, and educational and occupational plans for the future. If the teenagers were not attending school during the days of survey administration (due to illness or dropout), questionnaires were mailed to them at their homes. Extensive tracking and the provision of small monetary incentives to participate in the research yielded excellent panel retention (93%) through the high school period. For the 12 years immediately following high school (1992–2003), respondents provided monthly records of educational attendance, unemployment, and both part- and full-time labor force participation

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<sup>2</sup>Due to the collinearity of age and time when data are gathered by an annual survey, age is not included in these analyses.

via life history calendars. These were completed annually, except in 1996 and 2001 (in 1997 and 2002 the calendars covered a two-year period, so as to obtain continuous records). By 2003, when most respondents were 29 and 30 years old, 71% of the initial participants had been retained. Panel retention in the later years of the study is not associated with numerous indicators of socioeconomic origin and prior attitudes, although males and non-whites have a higher risk of survey attrition than females and whites (Mortimer 2003).

## MEASURES

The YDS is unique in its inclusion of a subjective measure of career acquisition covering the period from adolescence through the transition to adulthood. This measure references the respondent's subjective view that the current job will continue as a career. In each survey year after high school (wave 5 in 1992 through wave 14 in 2003), respondents were asked, "how is your present job related to your long-term career goals?" The responses for this question were: "It is not linked to my long-term career objectives;" "it provides skills or knowledge that will prepare me for my future work;" "it will probably continue as a long-term career;" and "I don't know." The response "continue as a long-term career" is coded 1, while all other responses are coded 0.

Early factors that may affect career acquisition, considered as time invariant in the analysis and measured during high school, include socioeconomic background, demographic characteristics, extracurricular participation and grades, self-esteem, educational aspirations, economic efficacy, and teenage work investments. Descriptive statistics for the time invariant measures included in the analyses presented here are shown in Table 1. Parental education and occupational levels were obtained by mail surveys of the mothers and fathers during the first year of the study. Parents of 96 percent of students responded. A series of three dummy variables register the highest educational credential of the respondents' parents, referencing: a four-year Bachelor's degree or higher; some college or a junior college degree; or a high school degree or lower. If only one parent were present in the household, that parent's education level is our indicator. Thirty percent of the respondents had at least one parent with a four-year BA/BS degree. The parents of the YDS respondents were also asked to report the highest level of education they felt their child would achieve (ranging from 1 = less than high school to 8 = professional degree), with the higher of the two parental scores used in our analyses. Forty-five percent of the parents felt their child would achieve a four-year college degree or higher.

The higher occupational standing of the mother or father is indicated by Hauser and Warren's (1997) composite measure of occupational earnings and education. These SEI scores are based on the occupational earnings and education of workers in the 1990 Census. Because not all parents were employed or residing with the respondent (non-resident parents were not surveyed), a dummy variable indicates whether both the mother's and the father's occupational data were missing during the 1988 survey administration (1 = missing, 0 = valid occupational code). Valid occupational data were available for 79% of the mothers and 65% of the fathers. Of those parents who were missing occupational census codes, the majority of mothers' data were missing because they were not employed, while most fathers' missing data occurred because they were not currently residing with the respondent. Thus, the occupational SEI score is coded zero if the mother and father are not employed or there is missing occupational data for both. Overall, both parents were unemployed or missing occupational data in 9 percent of cases.

Other predictors of career acquisition include academic performance and school involvement during the ninth grade. These are measured by grade point average and hours spent in extracurricular activities per week, respectively, with the latter logged due to skewness.<sup>3</sup> Educational aspirations, also measured in the ninth grade, are represented by three dummy variables: BA/BS degree or higher, less than a BA/BS degree, and an unsure category. Sixty-



nine percent of respondents aspired to receive a BA/BS degree or higher. Educational performance and aspirations are considered time-invariant, since they are less relevant after the high school period (grades do not apply to youth who are not attending school; and educational aspirations become less pertinent as youth increasingly complete their schooling.)

Positive self-esteem, derived from Rosenberg's self-esteem scale, is based on the following questions: "I feel I have a number of good qualities;" "I take a positive attitude toward myself;" and, "On the whole, I am satisfied with myself." Economic self-efficacy is measured in the tenth grade from a scale comprised of the questions: "Thinking about the future, what do you think are your chances of (1) having a job that pays well, (2) being able to own your own home, and (3) having a job that you enjoy doing?" Self-esteem and economic self-efficacy may be considered controls for personality factors that could lead to differential recognition of jobs as "careers" (e.g., generally optimistic people might view both themselves and their jobs in more positive terms). Demographic variables include gender (coded 1 if male), race (coded 1 if white), nativity (coded 1 if native-born), and intact family (coded 1 if a two-parent family of origin).

A series of dummy variables is used to capture high school work patterns in grades 10 through 12 (Mortimer 2003). Based on continuous work histories during these three years, the measures reflect employment duration, measured in months, as well as intensity, or the average hours of work during the full period of employment. Each was dichotomized: months at the median for all who worked, which distinguished extensive, long-term employment from shorter investment in work (on average, about 11 versus 22 months in a 24 month period of observation); and hours, so as to separate those who on average work more than 20 hours per week from those who work more moderately, limiting their hours to 20 or fewer during the periods of employment. The work hour indicators included both weekday and weekend work while school was in session.

The resulting typology, based on the cross-classification of these two dimensions, yielded five distinct patterns of work investment: the "most-invested" (high duration and high intensity) workers; the "sporadic" (low duration and high intensity) workers; the "occasional" low duration and low intensity workers; the "steady" high duration and low intensity workers; and the non-workers. The "most invested," "steady," and "occasional" workers each constitute about a quarter of the total sample. The "sporadic" workers make up about 17 percent of the total, while non-workers constitute only about 6 percent. It should be noted that the measures of work intensity do not include summer employment. The vast majority of teenagers work during the summer (Committee on the Health and Safety Implications of Child Labor, 1998), and employment at this time involves little "trade-off" between schooling and work.

Since the character of teenage jobs could influence adolescent work orientations and indicate the potential for human capital accumulation through work, we explored several measures of the quality of jobs averaged across the three years corresponding to the same time interval as the duration/intensity measures (10<sup>th</sup>–12<sup>th</sup> grades). These measures included self-reported indicators of general and specific learning opportunities, advancement opportunities, earnings potential, psychological engagement, work stress, work-school compatibility, and work-derived status (see Mortimer, 2003), as well as objective measures of job quality indicating the average socioeconomic status of jobs worked during the sophomore, junior, and senior school year (based on occupational education and earnings scores, see Hauser and Warren, 1997). To

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<sup>3</sup>To address the possibility that attachment to school, as indicated by extracurricular activities during high school, may also influence movement to "career," the log of extracurricular activities in the 12<sup>th</sup> grade was substituted for the 9<sup>th</sup> grade measure in our models but was found to have no significant effect on career acquisition (e.g., for the variables included in Table 4, Model 1,  $b = -.001$ ,  $p = .990$ ). Thus, the 9<sup>th</sup> grade measure was retained in the model.

gauge the potential impact of unpaid work on the acquisition of careers, we also included an indicator of volunteering from the 10<sup>th</sup> to 12<sup>th</sup> grades, measured as an ordinal scale for the number of years reporting this activity (0 to 3). Since none of these measures were related to career attainment, the descriptive statistics for teenage work quality and volunteering are not provided in Table 1 and they are not discussed further.

To examine patterns of work and schooling following high school, we constructed six mutually exclusive combinations of activities during each month, beginning after the scheduled date of graduation from high school in the Spring of 1991, and cumulated these measures across years (Staff and Mortimer, 2007). *School only* indicates months of attendance in school (including 2 and 4-year colleges as well as technical/vocational schools) while not working full-time or part-time. *School and full-time work* signifies school attendance combined with working 35 or more hours per week. Likewise, *school and part-time work* involves attending school but working less than 35 hours. *Part-time work only* references employment of less than 35 hours per week while neither attending school nor working full-time. *Full-time work only* indicates working more than 35 hours per week and no school attendance. Finally, *idleness* signifies no school attendance and no employment.<sup>4</sup>

Other factors after high school that may affect subjective career acquisition include receipt of a Bachelor's or an Associate's degree, characteristics of the current job, and family formation. Whether the respondent had acquired a Bachelor's or Associate's degree by a given year is each included as a time-varying dummy variable. The natural logarithm of the hourly wages, training time (measured in days), and job hours per week in current jobs are also included. If the respondent was not employed during a given year, we coded their hourly wages, hours, and training time as zero and included a dummy variable to indicate that the respondent was not working. Finally, in a manner similar to that of cumulative investment in work and school, we calculated the cumulative number of months in which the respondent was married or a parent by each wave.<sup>5</sup>

## METHOD OF ESTIMATION: DISCRETE-TIME LOGIT MODELS

We utilize discrete-time logit models for event history analysis to discern the influence of family, school, and work roles during adolescence and early adulthood on career attainment. We use event history models because we predict that individual characteristics, background factors, and teenage work investments, as well as temporal variation in work, school, and family roles after high school, will affect when career acquisition occurs. Event history analysis enables us to estimate models in which event occurrence may depend on time, time-varying, and time-stable covariates. Though we explore various representations of time, one specification of the model can be written as

$$\log\left(\frac{P_{it}}{1 - P_{it}}\right) = \alpha_t + B_1X_{it1} + \dots + B_kX_{itk}$$

where  $P_{it}$  is the probability that individual  $i$  responds that their current job is a career job during year  $t$ , given that the respondent had not previously experienced this event;  $B$  refers to the effects of the explanatory variables ( $X$ ) at time  $t$  on the probability of career attainment; and

<sup>4</sup>If respondents worked in both a full-time and part-time job in a given month, they were classified as full-time work only, or school and full-time work, depending on their school attendance during that month. For each wave, beginning from Spring of 1991 until Spring of 2003, the cumulative months were calculated for each of the six combinations of postsecondary schooling and work.

<sup>5</sup>Preliminary analyses of career acquisition also included 9<sup>th</sup> grade intrinsic work values, extrinsic work values, intrinsic motivation toward school, the anticipated importance of career in the future, alcohol use, school problem behavior, academic self-esteem, number of siblings, and occupational aspirations. These variables had no statistically significant effects in any of the models, and are therefore not described here nor shown in the tables.

$\alpha_t$  represents a series of dummy variables representing the year of survey administration. The outcome variable is coded 1 if the respondent considered their current job a “career” during year  $t$  and 0 otherwise. Discrete-time logit models are advantageous over analyses predicting events at particular end dates because they both appropriately handle the censoring of individuals who do not report career attainment during the period of observation and allow the effects of the explanatory variables to vary over time (Singer and Willett 2003; Allison 1995; Yamaguchi 1991).

The first step in estimating this model is to create a person-wave dataset for each wave of observation from 1992, or the year after the scheduled date of high school graduation, until 2003. During this 10-wave period, each wave is treated as a distinct unit of analysis.<sup>6</sup> During this time span, 32.6 percent of respondents did not report career attainment and are thus censored in the analysis. Respondents who report career attainment in 1992 contribute 1 person wave to the dataset, those who report career attainment in 1997 contribute 5 person waves to the dataset, and those respondents still in the dataset in 2003 (those who never declared a career throughout the observation period) contribute 10 person waves. The resulting person-year dataset corresponds to 706 respondents over 4,000 occasions.

## RESULTS

### DOES THE CHARACTER OF A CAREER JOB VARY BY SOCIOECONOMIC BACKGROUND?

As noted earlier, occupations that are subjectively labeled as careers might be expected to vary in character as a function of social background, most notably socioeconomic status (Sewell and Hauser, 1975; Featherman, 1980; Kerckhoff, 1994). The first goal of our analyses was to consider whether the characteristics of a “career” job vary by the young person’s socioeconomic origins. Considering the amount of training received in the job or the number of employees supervised as quality criteria, Analysis of Variance shows that the initial jobs declared as careers do not differ by family income (split in thirds)<sup>7</sup> or parent’s highest education (measured as high school, some college, and Bachelor’s or higher). However, jobs identified as careers by youth from higher SES backgrounds do have higher wages. According to post hoc contrasts ( $p < .05$ ), the highest family income and parental education groups have significantly higher wages than the lower two groups, but there is no difference between the lower groups. These contrasts are shown in Table 2. There is also a statistically significant effect of income and parental education on year of career acquisition, with later career acquisition observed in the highest family income and parental education categories. Nonetheless, all groups report their first career on average in 1996 or 1997.

Socioeconomic background might also influence subjective understanding of what kind of career is expected or possible (Sewell, Haller, and Straus 1957). For example, youth from higher socioeconomic backgrounds may expect to have professional or managerial “career” jobs; whereas less advantaged youth may more readily label skilled crafts jobs as careers. We consider this possibility by examining the type of job first labeled a career by the parent’s education. As shown in Table 3, those respondents who have a parent with a Bachelor’s degree (or higher) more often label a “professional specialty occupation” as their first career (31%) than either those who have a parent with some college (12%) or whose parents have a high school education or less (6%). Further, youth in the highest parental education group less often label an “administrative support occupation” (such as a clerical job) as a career than either of the other two educational background groups. By contrast, those with parents who have a high school education or less more often report that jobs in the “service” or “machine, transportation,

<sup>6</sup>There are 10 waves over 12 years because there was no survey administration in 1996 and 2001.

<sup>7</sup>Family income is measured in wave 1 on a 13 point scale. Here, we use 3 groupings, measured in 1988 dollars: \$0 to \$19,999, \$20,000 to \$39,999, and \$40,000 or more. For the Analysis of Variance, we dropped 64 respondents with missing values on family income.

unskilled labor, or other” categories are careers, compared to the higher parental education groups. Thus, there appears to be a difference in the character of occupations that youth of varying socioeconomic background subjectively label as their first career.

## PREDICTORS OF CAREER ACQUISITION

Our primary goal is to discern the influence of family, school, and work roles during adolescence and early adulthood on career acquisition. Table 4 displays the coefficients from five event history models predicting career acquisition. Model 1 includes the patterns of high school work and background characteristics. In Model 2, we add time-varying post-high school work and school investments. Model 3 considers whether receipt of an Associate’s or Bachelor’s degree influences career acquisition. Model 4 adds current job characteristics: hourly wages, training time, job hours per week, and a dummy variable indicating non-employment. Model 5 incorporates family formation behaviors and a term for the interaction of gender with parental employment. In all models, we control the effects of time using a series of dummy variables, which represent the waves of survey administration.<sup>8</sup> Though coefficients for time are estimated but not included in the preliminary models shown in Table 4, they are consistent with Figure 1; respondents are more likely to report employment in a career job in the later years of the survey than in the years immediately following the high school period.

In an initial model (not shown) we estimated the baseline hazard rate of career acquisition. Figure 1 shows that the hazard rate of career acquisition remains low for the first four years after high school (1992–1995). Many respondents reported initial acquisition of a “career” job about six or seven years after the end of high school, a typical time of BA/BS degree completion (Staff and Mortimer 2007). Among those who have not yet acquired a career, there is a large increase in the hazard between 1995 and 1997, and another sharp rise between 2000 and 2002 (these are the longer, two-year intervals, since no surveys were conducted in 1996 and 2001). Despite some unevenness, there is a long-term increase in the hazard of career acquisition up to 2002, followed by a decline in 2003.

### The Effects of Work and School Experiences during High School on Career Acquisition

As shown in Table 4 Model 1, males are about 46 percent more likely to report career attainment than females ( $100*[e^{0.377} - 1] = 45.8$ ), U.S. natives are 74 percent more likely than non-natives, and those from intact families are 60 percent more likely than those from non-intact families. We also see a positive and statistically significant coefficient for self-esteem; adolescents with higher self-esteem move toward careers more quickly. Interestingly, in view of their importance in models of status attainment, parents’ education, parents’ occupational status, parental educational expectations for the child, and youth’s own educational aspirations, economic self-efficacy, and school performance (GPA) show no statistically significant effects in Model 1.<sup>9</sup>

As hypothesized, work investment during the high school years is found to be predictive of subjective career achievement.<sup>10</sup> The coefficients for the four dummy variables representing

<sup>8</sup>The dummy variables representing each wave proved to be a better “fit” than did a linear effect of time, a quadratic effect, a cubic effect, and so on up to the eighth power; the natural log of time; and the square root of time.

<sup>9</sup>A preliminary model, not shown, including only socioeconomic background, gender, race, nativity, and family structure, showed a significant negative effect of parent’s education [BA/BS vs. high school,  $b = -.239$ ;  $p < .05$ ]; yet this effect diminishes to statistical non-significance when the behavioral and attitudinal variables in Model 1 are controlled.

<sup>10</sup>Further, in models including only high school work patterns and socioeconomic background indicators (family income and parental education) as predictors, the effects of the early work patterns are unchanged. Thus, the influence of the work investment patterns does not appear to be spurious, reflecting economic deprivation or low parental education. Moreover, the high school work patterns did not diminish or condition the effects of the socioeconomic indicators (conditioning effects were tested by inclusion of interaction terms). We conclude that the high school work investment patterns have independent effects on subjective career achievement, but do not mediate or moderate the effects of socioeconomic background.

high school work patterns are all statistically significant and negative in direction. This pattern shows that the “most invested” high school workers, the reference category, are more likely to report a “career” job than youth who limit their hours of employment or do not work at all. Youth who worked intensive hours but restricted the duration of their employment (i.e. the “sporadic” workers) are also less likely than the most invested workers to report a “career” job in later waves of the study. Notably, the small minority of youth who did not work during high school were 53 percent less likely to report career attainment in subsequent years than were the “most invested” workers. (As noted earlier, neither the quality of the jobs held nor volunteering during high school was predictive of subjective career acquisition.)

### The Effects of Work and School Investments Following High School on Career Acquisition

Models 2, 3, 4, and 5 include both time-varying and time-invariant predictors. Although not shown in Table 4, the successive inclusion of each set of predictors significantly improves the fit of the preceding model.

Model 2 shows the effects of the school attendance and work patterns after high school. Cumulative months of “idleness” is the only statistically significant predictor of career acquisition in this model. Those who spend more time neither attending school nor working move more slowly into “careers.” Model 3 adds Bachelor’s and Associate’s degree attainment and two interactions. Both the BA/BS degree (marginally) and the Associate’s Degree are found to promote career acquisition.

It is reasonable to suppose that the various forms of investment in school and work could have different meaning depending on the educational program pursued (Dougherty 1987). For example, combining school and full-time work in the context of an Associates’ Degree program might be more promotive of career acquisition than when this combination of schooling and employment occurs while the student is working toward a BA/BS degree. To explore such possibilities, all interactions between Associate’s Degree or BA/BS receipt, on the one hand, and the cumulative investment patterns, on the other, were added to the model one at a time. Only the two that proved to be statistically significant, involving the “school only” and “part-time work only” are included in Model 3. These are somewhat difficult to interpret since cumulative schooling (without work) and cumulative months of part-time work could occur prior to, or following, degree receipt. Still, they suggest that these investments have varying implications for subjective career identification in the context of distinct educational trajectories.

First, the interaction of BA/BS degree receipt and the cumulative months of school attendance (without work) is positive in direction and statistically significant. Comparing the coefficients in Models 2 and 3, the effect of cumulative months attending school in the absence of work is negative in direction but not statistically significant in Model 2, but it becomes significantly negative in Model 3. Whereas cumulative investment in schooling in the absence of work appears to retard “career” acquisition, this negative effect is suppressed by school attendance’s positive link to BA/BS receipt, which (marginally) fosters “career” recognition. Figure 2 graphs these relationships and shows that the log-odds of career acquisition diminish with cumulative months of educational attendance (unaccompanied by paid work) for those who have not received BA/BS degrees. As youth spend increasing amounts of time exclusively in school, most of whom are working towards a 4-year degree, their chances of career acquisition are reduced. But among those who obtain this degree, career attainment is unaffected by months of “school only”. This interpretation is strengthened by the fact that, on average, among youth who achieved a BA/BS degree, 12.5 months were spent in the “school only” state *prior to* receiving the degree; only 2.4 months were spent in this state after receiving the degree. For the relatively few youth who continue the “school only” pattern while working for postgraduate



degrees, it is reasonable to suppose that the likelihood of “career acquisition” would also be diminished.

Second, receipt of an Associate’s Degree appears to diminish the likelihood of “career” attainment for those who spend long periods of time exclusively in part-time jobs (see Figure 3). For those who receive Associate’s Degrees, more months of “part-time work only” occur prior to the receipt of this degree than following (8.6 vs. 5.2 on average). Some youth who have been unable to obtain full-time work may attempt to acquire further education, culminating in an Associate’s Degree. Others may be unable to acquire full-time jobs after obtaining this degree. In both instances, “career attainment” is diminished.

Returning to Table 4, Model 3, we see that the cumulative combination of schooling and full-time work is negatively related to career acquisition. Whereas schooling generally delays career acquisition (when pursued alone, as we have seen, or in conjunction with full-time work), interestingly, when combined with part-time work, schooling has no negative influence on the tendency to evaluate one’s job as a career.

### The Effects of Work Quality and Family Formation on Career Acquisition

Model 4 adds the work quality variables following high school; all three are shown to be positively related to “career” acquisition. Those who have higher hourly wages, more training in their current jobs, and work more hours per week move more rapidly into “careers.” Further demonstrating the importance of these job features for “career” development is their function in mediating the impacts of variables included in prior models. For example, the most invested workers during high school appear to move more quickly than non-workers into careers because they obtain the more favorable jobs. (The coefficient for non-workers loses its statistical significance from Models 3 to 4). Further, the effect of cumulative months of idleness is highly significant in Models 2 and 3, but it becomes non-significant when job quality indicators are controlled.<sup>11</sup> Cumulative “idleness” apparently makes it quite difficult to obtain jobs with features that promote their identification as “careers.”<sup>12</sup>

Model 5 includes the measures of cumulative months of marriage and parenthood.<sup>13</sup> Months of marriage have no significant effect, but each month of parenthood increases the log-odds of career attainment by .011.<sup>14</sup> Given the likelihood that the process of subjective career acquisition is different for men and women, we also explored interactions with gender. Only gender \* parental unemployment had a statistically significant effect. This interaction suggests that females are more adversely affected in the absence of an employed parental role model.

### Interactions of Predictor Variables with Time

Table 5, Model 6 includes all time-varying predictors and significant interactions with time. The statistically significant and positive effects associated with a two-parent family of origin, having high self-esteem, and gender are retained throughout the models. Grade point average shows a negative effect on “career,” suggesting that an academic orientation leads to the

<sup>11</sup>In models not shown, we divided cumulative months of idleness into cumulative months of full-time homemaking and cumulative months of “otherwise idle.” Throughout all the models paralleling those shown in Table 4, homemaking behaves very similarly to the coefficients in Table 4 for idle (as does the coefficient for otherwise idle). Like idleness in Table 4, homemaking and otherwise idle have significant effects until job characteristics are added in Model 4. Given the similarity of the pattern of findings, for parsimony we include only cumulative months of idleness.

<sup>12</sup>To further explore the impacts of these intervening variables, in additional models (not shown) each job characteristic was entered separately. Any one of the three job characteristics was found to mediate the effect of idleness and the difference between the non-workers and most invested workers in high school.

<sup>13</sup>While we acknowledge that parenthood and career acquisition are likely reciprocally related to one another, we include parenthood in the model mainly as a control variable.

<sup>14</sup>The interaction between cumulative months of idleness and cumulative months of parenthood (not shown) was not statistically significant.

postponement of “career” acquisition when subsequent work and educational investments and attainments are controlled.

We speculated that part of the advantage of coming from a two-parent home in career pursuit derives from the high prevalence of dual-earner families; in this panel, 65 percent of the parents in two-parent families were both employed when the youth were in the 9<sup>th</sup> grade. Furthermore, single parent families are much more likely than two-parent families to have no employed parent (28 percent of single parent families vs. 8 percent of dual parent families in this sample). However, including number of earners in the family of origin did not diminish the magnitude of the family structure coefficient; nor was this variable statistically significant.

Three of the four variables representing high school work patterns lack statistical significance in Model 6. Differences between occasional workers and non-workers, on the one hand, and the most invested workers, on the other, have steadily lessened across model specifications. As we have seen, the occasional high school work pattern appears to exert its impact on career acquisition through its linkages with subsequent investments and attainments, especially those related to schooling. Differences between non-workers and the most invested workers, in contrast, are more strongly related to early adult job characteristics. The steady pattern, involving long-term restriction of high school investment in work, retains a significant negative effect in Model 6. In this final model, school investment combined with full-time work is the only postsecondary investment pattern that significantly postpones careers. Each additional month decreases the log-odds of career acquisition. (Cumulative months of school only and idleness have marginally significant effects.) Those who obtain Associate’s Degrees, on-the-job training, higher wages, and longer work hours are more likely to identify their jobs as careers.

In order to determine whether the predictors vary in their influence over time, we also examined their interactions with year of survey administration. Only the interactions between survey year and days of training proved to have significant effects in the full model. The negative coefficients associated with these interaction terms combined with the main effect, shown in Model 6, suggest that on-the-job training has the largest return for declaring a career right after high school, and has little impact thereafter. The coefficients for time in Table 5 also allow observation of the increasing propensity to consider one’s job as a “career” as the years progress following high school. All coefficients (except 1999) indicate greater likelihood of recognizing one’s job as a “career” after 1992, the first year following high school.<sup>15</sup>

Understanding the process through which adolescents with distinct work investment profiles move toward “careers” could be illuminated by taking the type of postsecondary school program attended into account. For example, the most invested workers during high school might be more drawn to vocational schools and community colleges, whereas steady workers seek entry to four-year college programs. Since we lack monthly data on *type* of postsecondary school attended, this variable could not be included in the event history analysis. We find clear links, however, between the high school work pattern and attendance in different kinds of educational institutions (as indicated by a survey question) during the first year after high school. These reveal typical educational pathways through which young people move from adolescent work to postsecondary education, and eventually to adult “careers.” As shown in

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<sup>15</sup>In an additional analysis (not shown), we assessed whether unemployment affected career acquisition. Unemployment represents not working but looking for work, with no reference to current school attendance. This cumulative measure was highly correlated with idleness at each wave and had no significant effects in analyses with and without idleness. Therefore, we only include idleness in our analyses. We also considered whether variation in job availability may affect the timing of career acquisition. In a supplemental analysis (not shown), we included a time-varying measure of the local unemployment rate (based on the respondent’s zip code) in our regression analyses. The local unemployment rate yielded no statistically significant effects on career acquisition, nor did it substantially change our pattern of findings.

Figure 4, close to half of steady, occasional, and non-workers attend 4-year colleges; less than one-fourth of sporadic and most invested workers do so. The most invested workers are the most likely to attend community colleges and vocational-technical schools; these educational programs are more likely than 4 year colleges to have a vocational component, preparing these youth for more rapid entry into careers. Also of interest are the large percentages of youth in the most invested, sporadic, and not working categories who do not attend a post-secondary educational institution during the first year after high school. Figure 4 thus suggests two typical pathways from school to work; one featuring moderate work investment in high school followed by 4-year college attendance, the other intensive employment during adolescence leading to attendance at other types of postsecondary institutions.

## DISCUSSION

The pace by which young people come to recognize their jobs as careers appears to be far from random. Building on our previous finding that high school employment patterns influence long-term educational attainment (Staff and Mortimer, 2007), we hypothesized that adolescents' labor force participation during high school would also influence the process of "career" acquisition thereafter. Here we show that the "most invested" high school workers more rapidly acquire "career" jobs. This advantage, vis-à-vis youth who invest little in work during high school (the "occasional workers" and "non-workers"), appears to be attributable to the character of their postsecondary educational attainments and the higher quality of their early jobs. The "steady" workers, however, continue to show slower movement toward careers even when their educational attainments, wages, training time, and job hours are taken into account.

This pattern of findings provides evidence that young people pursue different "tracks" with varying emphases upon school and work, which commence as early as age 14 and 15, and continue through the twenties. Youth who are more strongly oriented toward schooling are more likely to pursue steady work during high school and invest more in postsecondary education, especially in 4-year colleges, during the years following. As hypothesized, an academic orientation to school, as indicated by high school GPA, is also found to slow the acquisition of career. Steady workers' movement toward careers is decidedly less rapid than that of youth who exhibit the most invested high school work pattern. In contrast, youth who are the most oriented toward work are employed at high duration and high intensity during high school; compared to their classmates, they are especially likely to attend community colleges and vocational/technical schools, and they tend to move more rapidly toward careers during the transition to adulthood.

These findings suggest that the duration of high school work, not simply the hours of employment while working, are important, as youth who pursued sporadic employment during high school, despite their spells of high intensity work, move more slowly than the most invested high school workers toward subjective careers in young adulthood. Given the relatively low rates of postsecondary educational attendance and relatively high rates of "idleness" in this group (Staff and Mortimer, 2007), their movement toward careers appears to be impeded by a perpetuation of the sporadic employment pattern that they established during high school.

What then accounts for the capacity of the "most invested" high school workers to more promptly find a career? These youth have obtained considerable work experience from their part-time jobs during high school before entering the full-time, non-seasonal labor force. As employers take youth's prior labor force experience into account in evaluating their suitability for particular openings, it stands to reason that they would have an advantage over youth with similar formal qualifications in obtaining career-like employment. Such cues may be especially

important in the American context where educational credentials are generally not vocationally specific.

While we show that high school employment patterns significantly alter the pace of movement toward careers, we also examine whether youth's investments in work and schooling after high school hasten or postpone "career acquisition." As hypothesized, young people who obtained higher quality jobs moved more rapidly into "careers" than youth whose jobs entailed low hourly wages, little or no on-the-job training, and part-time work hours. Not surprisingly, "idleness" (including homemaking) is associated with delay in career acquisition, and this effect appears to be largely explained by the difficulty "idle" youth have in subsequently acquiring good-quality jobs.

It is especially important to note the distinct patterns of influence upon "career acquisition" associated with the postsecondary educational and work investments. Schooling, obtained alone or in combination with full-time work, tends to diminish the likelihood that one's job will be considered a "career." This finding is to be expected, given that postsecondary schooling would generally interfere with the pursuit of a career. However, the effect of schooling in prolonging career acquisition does not occur when it is accompanied by part-time work. Just as moderate work during high school does not interfere with post-secondary educational attainment (Staff and Mortimer, 2007), so too, the combination of schooling and part-time work after high school appears to be compatible with the next age-appropriate marker of attainment in the socioeconomic career: acquisition of a "career" job.

The positive effect of the Associate's Degree, as well as the positive impact of on-the-job training right after high school, are noteworthy in light of Kerckhoff's (2003) argument that in the absence of occupationally-linked educational certification, youth enjoy little career payoff for "intermediate" educational investments and attainments (that is, below the level of the BA/BS degree). Kerckhoff's argument seems to be most applicable to youth who receive just "some college," in the absence of a 4-year degree. Though the data do not allow us to assess the vocational content of Associate's Degrees, they are likely to be more vocationally specific than the BA/BS. On-the-job training is, by virtue of its context, clearly occupationally linked.

Although we hypothesized that advantaged backgrounds may serve to delay or privilege young people in their movement toward careers, socioeconomic origins does not directly affect the timing of "career acquisition." However, we find that youth from two-parent families move more quickly into "careers" than those in single parent and other family arrangements. In accord with Clausen's (1991) notion of "planful competence" and vocational psychologists' emphasis on confidence and other psychological assets in approaching the labor market (for example, Savickas, 2002), self-esteem is associated with more rapid career acquisition.

Although we predicted that males would acquire careers more quickly than females (and this prediction was confirmed), we also found that the process by which males and females transition to "career-like" jobs is quite similar. However, the absence of an employed parental role model is found to slow females' movement toward careers. Consistent with still prevalent gender role norms, males are advantaged in the pursuit of career (partly due to their capacity to obtain higher-quality jobs), and, as hypothesized, parenthood also matters in hastening career acquisition. Interestingly, however, parenthood is not a more important precursor of career acquisition for men than women. The overall pattern of findings may reflect the increasingly convergent character of the transition from school to work for young men and women. Finally, with time, youth tend to progress toward career-like jobs independent of the various activities that we were able to take into account in this analysis.

## CONCLUSION

What does this study tell us about how youth move toward careers in the highly unstructured school-to-work transition regime characteristic of the contemporary United States? One route involves less intensive employment during high school, followed by post-secondary educational investment, most likely in four-year colleges. This pathway, favored by more advantaged youth, tends to delay the identification of one's job as a "career." A second route involves early intensive work experience during high school that renders the youth well positioned for the acquisition of employment that is acknowledged to have career potential. Human capital investment through on-the-job training after high school and receipt of an Associates' Degree also have positive payoff with respect to acquiring a "career" job. Whereas the first, more advantageous route with respect to eventual socioeconomic attainment, is the goal of most young people and their parents, we see that the second may also constitute a viable pathway to career-like employment. These findings can inform the efforts of educators, employment counselors and others who aim to guide youth toward a successful school-to-work transition.

This research paves the way for future investigations of the dynamic features of early career progression. Here, we examine the first transition into a subjectively recognized career as a significant milestone of transition to adulthood. This study thus parallels other research on reversible "markers" of adulthood, such as marriage or initial departure from the family home. The first designation of one's job as a career is an important, overlooked marker of transition to adulthood, and we provide some understanding of the factors that promote this marker. It should be noted, however, that subjectively labeling one's occupation as a career is a reversible phenomenon. In this panel, 35 percent never report working in a career during the period of observation and 21 percent report a "permanent" career (once they designate their job as a career, this label persists throughout the remainder of the study). Moreover, 21 percent report a career loss (after reporting that their job is a career, they subsequently indicate that their job is not a career), and 23 percent report a career recovery (i.e., showing a pattern of career, not career, career). Future analyses will address the potentially dynamic career trajectory.<sup>16</sup>

Furthermore, the career measure's response options enabled the respondent to say whether the current job provided skills for subsequent movement into a career. A more detailed analysis could explore the nature of progression through such jobs. For example, some persons might move from "unrelated jobs", to jobs that provide skills for a career, to a career; others might move back and forth, in a more "driftlike" pattern, between unrelated and career-relevant jobs.

To conclude, in the absence of universal, well established institutional bridges from education to establishment in work, behavioral strategies referencing relative investments in school and employment, initiated in adolescence and continuing through the transition to adulthood, appear to hold sway.

## Biographies

**JEYLAN T. MORTIMER**, Professor of Sociology at the University of Minnesota, has conducted longitudinal studies of occupational choice, vocational development in the family

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<sup>16</sup>We estimated a multinomial logistic regression model, predicting these patterns with all the time invariant predictors in our analysis, systematically varying the reference category to observe all possible comparisons. Overall, few variables distinguish these groups. Whites, non-natives, and those with higher GPA are more likely to report a permanent career than a career loss. Those who do not work at all during high school (relative to the most invested workers) and non-natives are more likely to obtain a permanent career than to undergo a loss followed by career recovery. Males, whites, and those from two-parent families are more likely to obtain a permanent career than no career at all. Finally, whites and US natives are less likely to undergo a career loss than to have no career at all. Although there are some exceptions, for the most part, indicators of advantage, such as being male or white, are associated with the more stable career patterns relative to the other possible patterns.



and work settings, psychological change in response to work, job satisfaction, work involvement, and the links between work and family life. Her book, *Working and Growing Up in America*, examines the impacts of adolescent work experience on high school students and its consequences for mental health, adjustment, and achievement as they mature. She is now studying the effects of adolescent work on the timing of markers of transition to adulthood and early socioeconomic attainment. She is co-editor (with Michael Shanahan) of the *Handbook of the Life Course*.

**MIKE VUOLO** is a PhD student in the Department of Sociology at the University of Minnesota. He received an M.S. in Statistics from the University of Minnesota in 2007. He has recently published in *Punishment and Society* and has a forthcoming article in *Law and Society Review*.

**JEREMY STAFF** is Assistant Professor in the Department of Sociology at the Pennsylvania State University. His current research examines the short- and longer-term effects of early work experiences on adjustment and socioeconomic achievement during the transition to adulthood. He has recently published in *Social Forces*, *Criminology*, and *Sociology of Education*.

**SARA WAKEFIELD** is an Assistant Professor in the Department of Criminology, Law and Society at the University of California, Irvine. Her research examines the influence of life course events on crime and mental health. She is currently studying the effects of parental incarceration on children's mental health and the transition to parenthood among criminal offenders.

**WANLING XIE** is a statistician at the Dana Farber Cancer Institute in Boston. She recently received an M.A. in Sociology and an M.S. in Biostatistics from the University of Minnesota. Her interests in Sociology include work and occupations, social networks, and quantitative methods. She has several recent publications reporting cancer patient research.

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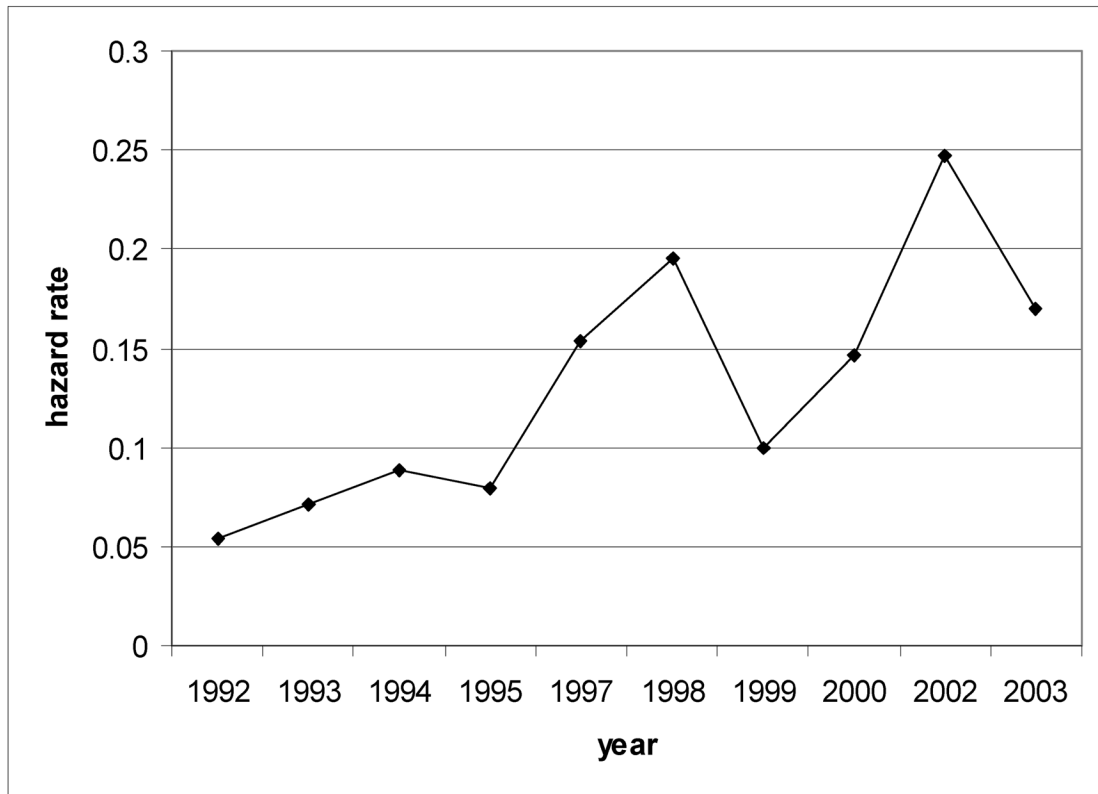
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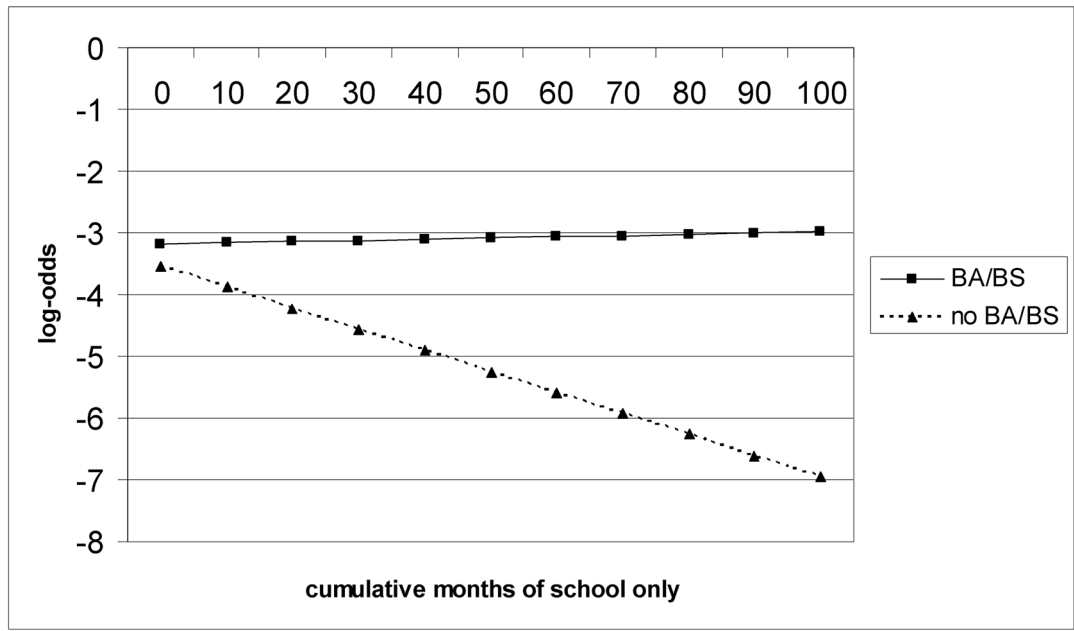
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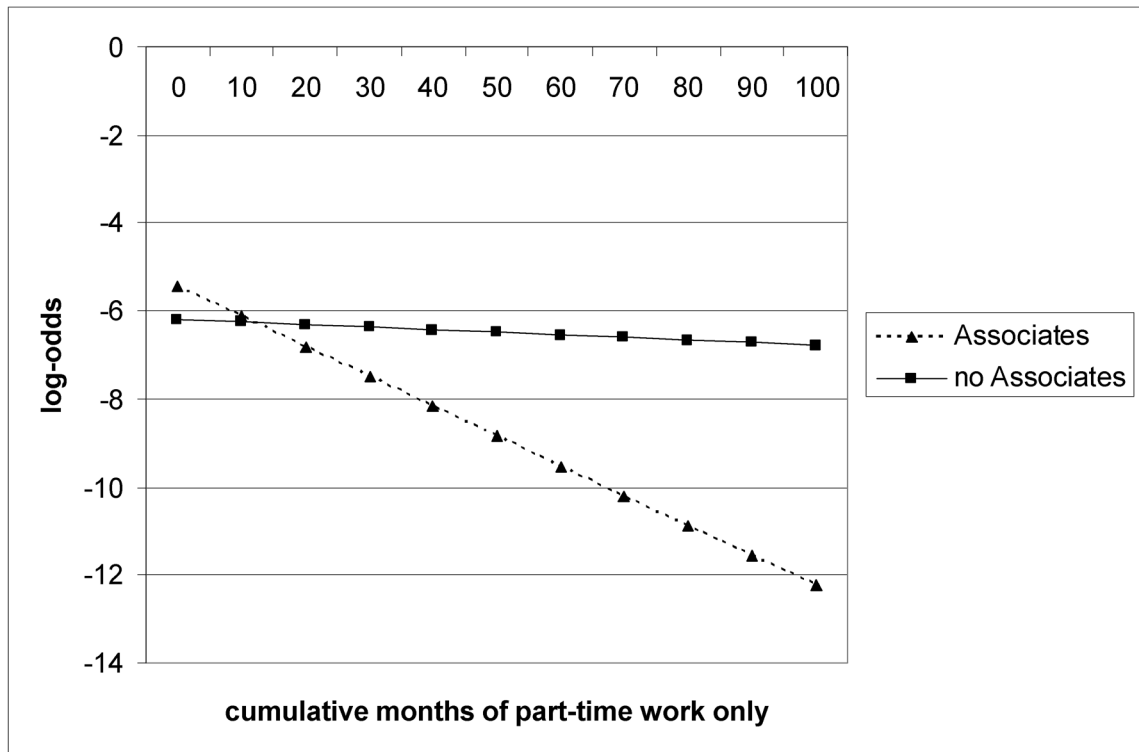




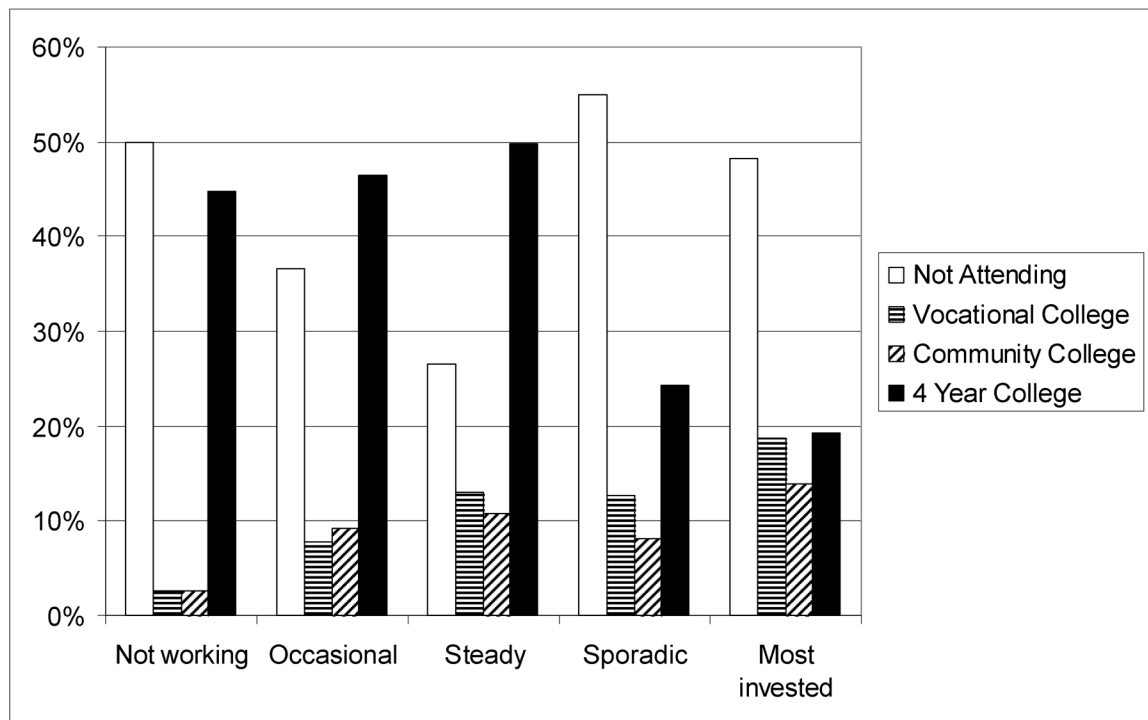
**Figure 1.**  
Hazard Rate of Career Acquisition by Year



**Figure 2.**  
Effect of Cumulative Months of “School Only” on Career Acquisition Conditioned on BA/BS Receipt (Model 3)



**Figure 3.**  
Effect of Cumulative Months of “Part-time Work Only” on Career Acquisition Conditioned on Receipt of Associate’s Degree (Model 3)



**Figure 4.**  
Percentage of YDS Respondents who attend a Community College, Vocational School, or Four-Year College in the Year Immediately Following High School by Teenage Work Status

**Table 1**  
Descriptive Statistics for Time-invariant Measures

<i>Variables</i>	<i>Mean (Std dev)</i>
Parent(s) educational achievement	
High school	.39
Some college	.31
BA/BS degree of higher	.30
Parent(s) occupational status	32.04 (20.75)
Parent(s) not employed/missing occupational status	.09
Male	.44
White race	.79
US born	.94
Two parent family	.74
Parent(s) educational expectations for child	4.62 (1.86)
Extracurricular hours per week (9 <sup>th</sup> grade, Logged)	1.63 (1.13)
GPA (9 <sup>th</sup> grade)	6.68 (2.36)
Positive self-esteem (9 <sup>th</sup> grade)	13.50 (2.37)
Educational aspirations (9 <sup>th</sup> grade)	
Less than BA/BS degree	.18
BA/BS degree	.69
Unsure	.13
Economic Self-Efficacy (10 <sup>th</sup> grade)	12.05 (2.29)
Teenage Work Investments (10 <sup>th</sup> – 12 <sup>th</sup> grade)	
Most Invested	.25
Steady	.27
Sporadic	.17
Occasional	.24
Non-workers	.06
N	706

**Table 2**

Post Hoc Contrasts: Average Hourly Wages at Career Acquisition by Socioeconomic Background

	Socioeconomic Background			<i>t</i>
	Parent: High school or less	Parent: Some college	Parent: Bachelor's or higher	
Contrast 1	\$10.63	\$11.29		0.773
Contrast 2	\$10.63		\$15.14	5.177***
Contrast 3		\$11.29	\$15.14	4.177***
	Parent: Low income	Parent: Middle income	Parent: High income	
Contrast 1	\$11.01	\$10.83		-0.181
Contrast 2	\$11.01		\$13.54	2.695**
Contrast 3		\$10.83	\$13.54	3.457***

\*\*  
*p*<.01,\*\*\*  
*p*<.001



**Table 3**

Variation in Type of Career Job by Socioeconomic Background

Occupational Type (2000)	Socioeconomic Background		
	Parent: High school or less	Parent: Some college	Parent: Bachelor's or higher
Executive, administrative, and managerial	13%	8%	11%
Professional specialty	6%	12%	31%
Technicians and related support	3%	8%	7%
Sales	7%	12%	9%
Administrative support occupations, incl. clerical	20%	23%	15%
Service <sup>1</sup>	20%	12%	11%
Precision production, craft, and repair	13%	14%	5%
Machine, transportation, unskilled labor, other <sup>2</sup>	18%	11%	11%

<sup>1</sup> Includes private household, protective service, and other service occupations.

<sup>2</sup> Includes machine operators, assemblers, and inspectors; transportation and material moving occupations; handlers, equipment cleaners, helpers, & laborers; and farming, forestry, and fishing occupations

*Note:* Table only includes those who acquired careers by 2000 due to a change in the occupational categories used prior to and after 2000 (due to the development of the ONET).

Table 4

## Discrete-Time Logit Models of Career Attainment

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	(s.e.)	B	(s.e.)	B	(s.e.)	B	(s.e.)	B	(s.e.)
<i>Teenage Work Investments</i>										
Occasional vs. Most Invested	-.395**	(.154)	-.329*	(.157)	-.248	(.158)	-.190	(.162)	-.140	(.163)
Non workers vs. Most Invested	-.763**	(.265)	-.612*	(.274)	-.610*	(.278)	-.464	(.287)	-.451	(.290)
Sporadic vs. Most Invested	-.442**	(.165)	-.367*	(.167)	-.319#	(.168)	-.325#	(.174)	-.296#	(.174)
Steady vs. Most Invested	-.385**	(.143)	-.358*	(.145)	-.341*	(.146)	-.356*	(.149)	-.304*	(.150)
<i>Background Variables</i>										
Parent's Education: Some college vs. high school	-.002	(.134)	-.027	(.135)	-.016	(.136)	.019	(.139)	.026	(.140)
Parent's Education: BA/BS degree vs. high school	-.220	(.158)	-.175	(.163)	-.220	(.166)	-.195	(.170)	-.156	(.172)
Parent's occupational status	-.001	(.003)	-.001	(.003)	-.002	(.003)	.000	(.003)	.000	(.003)
Parent employed vs. not employed/missing	.017	(.237)	-.008	(.240)	-.032	(.241)	-.011	(.249)	-.524	(.332)
Male	.377***	(.109)	.334**	(.111)	.325**	(.111)	.235*	(.115)	.258*	(.120)
White race	.272#	(.152)	.204	(.156)	.177	(.157)	.092	(.162)	.184	(.166)
US born	.553*	(.274)	.576*	(.280)	.528#	(.280)	.514#	(.290)	.435	(.292)
Two parent family	.467***	(.131)	.454***	(.134)	.474***	(.135)	.515***	(.139)	.471***	(.139)
Parent's educational expectations for child	.030	(.037)	.009	(.039)	.003	(.039)	.006	(.041)	.015	(.041)
Extracurricular hours (Logged)	.091#	(.049)	.056	(.050)	.035	(.051)	.009	(.052)	.012	(.052)
GPA	-.025	(.028)	-.050#	(.029)	-.068*	(.030)	-.069*	(.031)	-.086**	(.031)
Positive Self-esteem	.064**	(.025)	.057*	(.025)	.063*	(.025)	.065*	(.026)	.064*	(.026)
Aspirations: BA/BS degree vs. less than BA/BS degree	-.270#	(.156)	-.303#	(.157)	-.256	(.158)	-.266#	(.160)	-.263	(.161)
Aspirations: Unsure vs. less than BA/BS degree	-.334#	(.197)	-.329#	(.198)	-.278	(.199)	-.317	(.203)	-.296	(.204)
Economic self-efficacy	-.013	(.025)	-.017	(.026)	-.021	(.026)	-.034	(.027)	-.035	(.027)
<i>Work and School Investments in Young Adulthood</i>										
Cumulative months full-time work only			-.002	(.006)	-.004	(.006)	-.008	(.006)	-.007	(.006)
Cumulative months school only			-.006	(.008)	-.035**	(.012)	-.022#	(.012)	-.024#	(.012)
Cumulative months idle			-.024***	(.007)	-.023***	(.007)	-.008	(.007)	-.013#	(.008)
Cumulative months school & full-time work			-.012	(.008)	-.016*	(.008)	-.027**	(.009)	-.027**	(.009)
Cumulative months school & part-time work			-.001	(.006)	-.008	(.007)	-.008	(.007)	-.007	(.007)
Cumulative months part-time work only			-.011	(.007)	-.008	(.007)	-.007	(.007)	-.007	(.007)
Associate's Degree					.830**	(.284)	.659*	(.289)	.715*	(.294)
Associate's * Cumulative months part-time work only					-.059**	(.023)	-.057**	(.024)	-.063*	(.025)
BA/BS degree					.412#	(.236)	.268	(.248)	.329	(.251)
BA/BS degree * Cumulative months school only					.037	(.013)	.027#	(.014)	.030*	(.014)
Hourly wages (Logged)					.677***	(.145)	.685***	(.145)	.685***	(.145)
Training time (Logged)					.152***	(.038)	.152***	(.038)	.153***	(.039)
Job hours per week (Logged)					.301**	(.105)	.301**	(.105)	.297**	(.105)
Respondent not employed					.162	(.212)	.162	(.212)	.155	(.213)
<i>Family Formation</i>										
Marriage									-.001	(.004)

	Model 1	Model 2	Model 3	Model 4	Model 5
Parenthood					
<i>Gender Interaction</i>					
Male * Parent(s) not employed					.011 <sup>***</sup> (.003)
Constant	-4.397 <sup>***</sup> (.525)	-3.804 <sup>***</sup> (.543)	-3.558 <sup>***</sup> (.550)	-5.700 <sup>***</sup> (.641)	.919 <sup>*</sup> (.442) -5.634 <sup>***</sup> (.645)

Note. The coefficients for the effects of time not shown;

# p<.10,

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

Table 5

<b>Model 6</b>			
<i>Time</i>	B	(s.e.)	Exp(B)
1993	1.061***	(.332)	2.888
1994	1.299***	(.342)	3.664
1995	.940*	(.401)	2.560
1997	1.621***	(.445)	5.056
1998	2.086***	(.489)	8.049
1999	.588	(.613)	1.800
2000	1.861**	(.607)	6.431
2002	2.511***	(.713)	12.314
2003	2.210**	(.803)	9.116
<i>Teenage Work Investments</i>			
Occasional vs. Most Invested	-.117	(.164)	.890
Non workers vs. Most Invested	-.455	(.291)	.634
Sporadic vs. Most Invested	-.295#	(.175)	.744
Steady vs. Most Invested	-.296*	(.151)	.744
<i>Background Variables</i>			
Parent's Education: Some college vs. high school	-.009	(.141)	.991
Parent's Education: BA/BS degree vs. high school	-.154	(.172)	.857
Parent's occupational status	.000	(.003)	1.000
Parent employed vs. not employed/missing	-.540	(.332)	.583
Male	.263*	(.121)	1.300
White race	.170	(.167)	1.186
US born	.455	(.293)	1.577
Two parent family	.475***	(.139)	1.607
Parent's educational expectations for child	.007	(.042)	1.007
Extracurricular hours (Logged)	.022	(.052)	1.022
GPA	-.081*	(.032)	.922
Positive Self-esteem	.064*	(.026)	1.066
Aspirations: BA/BS degree vs. less than BA/BS degree	-.243	(.162)	.784
Aspirations: Unsure vs. less than BA/BS degree	-.245	(.206)	.782
Economic self-efficacy	-.038	(.027)	.963
<i>Work and School Investments in Young Adulthood</i>			
Cumulative months full-time work only	-.006	(.006)	.994
Cumulative months school only	-.023#	(.012)	.977
Cumulative months idle	-.013#	(.008)	.987
Cumulative months school & full-time work	-.026**	(.009)	.974
Cumulative months school & part-time work	-.006	(.007)	.994
Cumulative months part-time work only	-.006	(.007)	.994
Associate's degree	.731*	(.293)	2.078
Associate's * Cumulative months part-time work only	-.062*	(.024)	.940
BA/BS degree	.344	(.251)	1.410
BA/BS degree * Cumulative months school only	.029*	(.014)	1.029
Hourly wages (Logged)	.707***	(.146)	.940
Training time (Logged)	.610***	(.126)	2.028
Job hours per week (Logged)	.303**	(.106)	1.840
Respondent not employed	.241	(.217)	1.355
<i>Family Formation</i>			
Marriage	-.001	(.004)	.999
Parenthood	.011***	(.003)	1.011
<i>Gender Interaction</i>			
Male * Parent(s) not employed	.940*	(.444)	2.560
<i>Days of Job Training * Time</i>			
Training1993*	-.461**	(.177)	.631
Training1994*	-.518**	(.173)	.596
Training1995*	-.343*	(.171)	.709
Training1997*	-.423**	(.157)	.655
Training1998*	-.640***	(.157)	.527
Training1999*	-.241	(.182)	.786
Training2000*	-.611***	(.172)	.543
Training2002*	-.548***	(.167)	.578
Training2003*	-.525**	(.191)	.592
Constant	-6.175***	(.670)	

# p&lt;.10,

\*  
p<.05,

\*\*  
p<.01,

\*\*\*  
p<.001