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## UNCERTAINTY IN EARLY OCCUPATIONAL ASPIRATIONS: ROLE EXPLORATION OR AIMLESSNESS?

**Jeremy Staff,**

Pennsylvania State University

**Angel Harris,**

Princeton University

**Ricardo Sabates,** and

University of Sussex

**Laine Briddell**

University of Richmond

### Abstract

Many youth in the United States lack clear occupational aspirations. This uncertainty in achievement ambitions may benefit socioeconomic attainment if it signifies “role exploration,” characterized by career development, continued education, and enduring partnerships. By contrast, uncertainty may diminish attainment if it instead leads to “aimlessness,” involving prolonged education without the acquisition of a degree, residential dependence, and frequent job changes. We use nationally representative data from the National Education Longitudinal Study (NELS) to examine how uncertainty in occupational aspirations in adolescence (age 16) affects wage attainments in young adulthood (age 26). Results suggest that youth with uncertain career ambitions earn significantly lower hourly wages in young adulthood than youth with professional and non-professional aspirations, supporting the view that uncertainty heightens the risk of labor-market problems.

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Social scientists have long shown that youth’s occupational aspirations have a direct effect on occupational attainment (Jencks et al. 1979; Sewell, Haller, and Portes, 1969; Sewell and Hauser 1975; Spenner and Featherman 1978). Youth with higher career aspirations tend to have higher job prestige and wages in adulthood, even after controlling for educational attainment, cognitive ability, and other social psychological factors. However, absent from most research is the substantial number of youth who do not report any occupational aspirations or do not know the type of job they would like to hold as adults. As we describe in more detail below, nearly 10 percent of students in 1992 reported not knowing what job they wanted to hold at age 30. In comparison to the numerous studies that link high career ambitions to social mobility and long-term economic success, there is a dearth of information on the implications that young people’s occupational uncertainties have for their future career outcomes.

We attempt to fill this void by examining how uncertain career aspirations at age 16 relate to wage attainments at age 26 using nationally representative data from the National Education Longitudinal Study (U.S. Department of Education 2002). The NELS data are ideal for our task because they include longitudinal information on career aspirations (or lack thereof) and early occupational attainments of a recent cohort of young women and men; most prior research relies on data from earlier cohorts. It is important to study more recent cohorts because youth currently face a fairly open and loosely structured transition from school to work (Kerckhoff 1998; Shavit and Müller 1998), and show considerable instability in their occupational ambitions during the transition to young adulthood (Rindfuss, Cooksey, and Sutterlin 1999; Rojewski and Kim 2003; Schneider and Stevenson 1999). In the context of a turbulent school-to-work transition characterized by frequent job changes and intermittent labor force participation (Kerckhoff 2002), we test hypotheses derived from two opposing concepts of “role exploration” and “aimlessness,” relating early career uncertainty to workers’ hourly earnings in young adulthood.

## BACKGROUND

A number of sociological and economic theories relate occupational aspirations in adolescence and socioeconomic attainment in adulthood. Most of these “supply-side” theoretical approaches focus on individual preferences, abilities, credentials, and early aspirations to explain workers’ longer-term educational prospects, employment, and earnings. For example, social psychological models of the early occupational attainment process highlight the importance of occupational aspirations as a key mediator of socioeconomic origins, academic ability and performance, significant others’ influence, and subsequent occupational attainment (Sewell and Hauser 1975). In addition, human capital theorists emphasize career aspirations as a reflection of early preferences and tastes for work, school, and family roles, which in turn, affects pathways into different types of jobs and career trajectories (Becker 1993). While the importance of career aspirations is firmly established in models of socioeconomic attainment, research has ignored the number of youth who are unsure about what job they want to hold in adulthood. In this section, we identify and examine three views on how occupational uncertainty in adolescence may affect the process of attainment among recent cohorts of youth.

### Uncertainty as Role Exploration

Beginning with Blau and Duncan (1967), investigations of occupational attainment have long assumed a socioeconomic life cycle of a sequential and orderly transition from school completion to the world of work (Duncan, Featherman and Duncan 1972). Yet, the timing and sequencing of school, work, and family roles is becoming more delayed and individualized (Buchmann 1989; Rindfuss, Swicegood and Rosenfeld 1987; Shanahan 2000), as recent cohorts of young people are increasingly cohabitating, residing with parents, and continuing their formal education into young adulthood while postponing marriage, parenthood, and career entry (Bumpass and Lu 2000; Ventura and Bachrach 2000; Mortimer et al. 2008). The once normative school-to-work transition is especially disorderly for recent cohorts of youth, as young people are also combining school with paid work, or returning to full-time schooling after periods of full-time work (Kerckhoff 2003; Shavit and

Müller 1998; Staff and Mortimer 2007). Whereas adult roles were once marked by their predictability by age, students currently experience a transition to work that is less predictable and a labor market that is more uncertain than before.

According to Arnett (2004), the increasing numbers of young adults postponing family formation and career acquisition and continuing formal education into young adulthood suggests a formative period in which young people are exploring possible life directions and gradually arriving at more enduring choices in intimate relationships, work, and worldview. Arnett notes the period between ages 18 and 25 is characterized by an overall sense of uncertainty in the planning of future life events (e.g., school completion, first job, marriage, parenthood, career acquisition), in addition to instability in the timing and ordering of work, school, and family roles. For example, emerging adults can occupy adolescent roles by continuing school, residing with their parents, and remaining childless, and at the same time they can show movement toward adulthood through career development or cohabitation, yet still not attain the traditional markers of adulthood (e.g., parenthood, marriage, career acquisition, and school completion).

For young adults who are in-between adolescence and adulthood (Arnett 2006), uncertain ambitions may promote longer-term socioeconomic attainment if uncertain career aspirations in adolescence signify role exploration. Role exploration between the ages of 18 and 25 may help ensure good choices regarding school, work, and intimate relationships. Although recent cohorts of youth have had considerable difficulty deciding on future occupations (Rindfuss et al. 1999; Savickas 2005), longer-term attainment is likely to be enhanced if uncertain aspirations lead to experimentation with different types of jobs or fields of study during emerging adulthood, which Arnett (2006) predicts leads to more enduring careers in young adulthood. Likewise, as Bynner (2005) suggests, independent role exploration in work and school may also lead to the accumulation of workplace experiences, job skills, and employer contacts that would similarly benefit wage attainments.

Job stability in the United States has been decreasing over the past several decades, with workers changing employers multiple times throughout their careers. Young people today have also become increasingly represented in flexible forms of employment, and consequently may be less likely to express concerns regarding job security (Bernhardt, Morris, Handcock and Scott 1999; Morris and Vekker 2001; Worth 2002). Thus it is plausible that having uncertain career aspirations may allow young people to adapt more easily to the opportunities available to them, while having narrowly defined aspirations could prove problematic if individuals are unable to adjust to rapidly changing employment conditions (Orrange 2003; 2007). The lack of clear occupational aspirations may provide youth with the flexibility needed to succeed in an unpredictable labor market (Beck 1992).

### **Uncertainty as Aimlessness**

The observed instability in work and school roles among recent cohorts of youth may also reflect role exploration that is more fragmented and purposeless, signifying an overall aimlessness in educational and career pursuits (Kerckhoff 2003). If uncertain career ambitions reflect aimlessness, early uncertainty may lead to prolonged schooling without the completion of a postsecondary degree and non-standard work arrangements in low-quality

and low-wage jobs. Thus, youth may gain a variety of work experiences or college credits that do not accumulate into a useful whole, which may serve to impede their long-term socioeconomic attainment.

Uncertain ambitions may be particularly problematic for the relatively large number of youth (approximately 42 percent) who initially enter four-year colleges but do not earn baccalaureate degrees (Schneider and Stevenson 1999). For example, it is plausible that youth who are uncertain about their desired future occupation may be more likely to change majors, transfer from one school to another, spend more time finishing a postsecondary degree, or drop out of school. Youth comprising this growing “sub-baccalaureate” labor market often move from job to job in the secondary labor market (Kalleberg et al. 2000). In addition, college dropouts tend to have no immediate plans for work (Rosenbaum 2001), nor do they have access to the career placement services provided by most colleges. Among college dropouts, it seems likely that youth lacking clear occupational aspirations would flounder in the labor market even more than those with more certain aspirations.

The notion that uncertainty in adolescence reflects role exploration rather than aimlessness rests on the assumption that youth today are strategically trying out new fields of study, jobs, and even new intimate partners. In a longitudinal study of an older cohort of young people, Clausen (1991a; 1991b; 1993) showed how active and realistic planning of school and work careers positively affected long-term adult functioning and socioeconomic attainment. Yet, as Fergusson and his co-researchers (2000) note, a growing number of young people seem to be engaged in a form of uncertain drift or “structured aimlessness” rather than linear and deliberate transitions towards their intended career goals. Young adults are expected to make good choices about their educational prospects and work careers, yet they face an increasingly complex and individualized school to work transition. As such, occupational uncertainty may reflect youth’s lack of knowledge about educational degrees and the labor market rather than a planned strategy of role exploration.

### **Uncertainty as Bounded Strategic Action**

Young people make choices and compromises in their own life based on the opportunities and resources available to them and the constraints of changing historical and social landscapes (Elder, Johnson and Crosnoe 2003; Evans 2007; Shanahan 2000). Strategic planning for future educational and work careers and the pursuit of these goals is bounded by age, gender, race/ethnicity, socioeconomic origins, historical circumstances (e.g., war and economic depression), institutional connections between work, school, and family, and stable preexisting orientations, abilities, and character traits (e.g., self-regulation, intellectual ability, and motivation). In the process of status attainment, occupational aspirations reflect the young person’s decisions and compromises with respect to their future occupational standing—defined particularly by gender and socioeconomic background. The chances that uncertain career ambitions will lead youth to successfully engage in independent role exploration and avoid labor-market “floundering” (Kerckhoff 2003) are likely constrained by these preexisting social inequalities.

In particular, youth who reside in low SES families may have fewer resources than high SES youth to best utilize uncertainty as a form of role exploration to promote long-term

attainment. Arnett (2000: 478) notes that “social class may be more important than ethnicity, with young people in the middle class or above having more opportunities for the explorations of emerging adulthood than young people who are working class or below ... [and poor youth may have] little chance for exploration of possible life directions.” Bynner (2005: 381) cautions that “assuming that most young people have the resources needed for navigation through the early stages of adult life may overlook the needs of those who have failed to gain the opportunity to embark.” Youth whose parents provide them with ample resources have more opportunities to prolong their education and delay their transition into full-time work (Staff and Mortimer 2008), and may have more opportunities to utilize role exploration as a way to find careers that best fit their talents and developing interests.

By contrast, youth from lower socioeconomic backgrounds are less likely to receive effective guidance from their parents to help them negotiate entry into institutions of higher education and to acquire the credentials, attitudes, and work habits that will enable them to succeed in the world of work (Bynner et al. 2002). Furthermore, youth in disadvantaged neighborhoods have fewer opportunities to explore new jobs and potential careers compared to those in areas that are more prosperous. Uncertainty may especially increase the risk of labor-market floundering among disadvantaged youth who already pay a wage penalty for their low socioeconomic origins (Bynner 2001), and who are more likely to place a strong value on job security than their more advantaged counterparts (Heinz et al. 1997).

Gender may also condition the impact of uncertain career aspirations during adolescence on wages in young adulthood. Gender role socialization and gender discrimination lead girls to aspire to (and anticipate) different types of jobs than boys, and recent research suggests the gendered nature of career choice partly reflects cultural beliefs regarding the competence of men and women in career-relevant tasks (Correll 2004). Women may feel less competent than men in making career decisions and therefore have greater occupational uncertainty.

Gender differences in adolescent value orientations, family formation intentions and behaviors, and preferences for occupational experiences and rewards may also “bound” the potential benefits of early occupational uncertainty in such a way as to make constructive role exploration as a means to higher wages in young adulthood less likely for women than men. Research shows that girls are more likely than boys to value the well-being of others and finding purpose in life, whereas boys are instead more interested in materialism and competition (Beutel and Marini 1995; Beutel and Johnson 2004). Likewise, girls are more likely than boys to value the intrinsic rewards of paid work, such as having opportunities to learn new skills, make use of previous talents and abilities, and to work with and be helpful to others (Johnson 2002; Mortimer et al. 1996). Given that these adolescent work values affect subsequent family formation, educational achievement, and occupational selection and attainment in young adulthood (Mortimer and Lorence 1979; Johnson and Mortimer 2000; Johnson 2005), gender might also condition the impact of occupational uncertainty on longer-term attainment. For young men, early occupational uncertainty might still lead to higher paying jobs because they have a tendency to value materialism, competition, and the extrinsic rewards of work (i.e., pay, prestige). By contrast, occupational uncertainty might lead to lower wages among young women because of their emphasis on the intrinsic rather than the extrinsic dimensions of work. Moreover, gender differences in family formation

intentions and lifestyle preferences (Hakim, 2002) may make the formation of occupational aspirations more complicated and uncertain for young women than men. These gender differences in family and work values may lead to temporary work interruptions and breaks in schooling that can reduce longer-term female wage attainments (Felmlee 1995; Hofferth and Curtin 2006; Jacobsen and Levin 1995). Research has long shown that the effect of professional occupational aspirations in adolescence on initial occupational status is twice as large for young women than for men (Sewell, Hauser and Wolf 1980). Because early career aspirations are particularly important for women, they may pay a greater wage penalty than men for holding uncertain aspirations.

In summary, increasing numbers of young people are facing uncertain combinations of education, training, and non-standard work arrangements (Kalleberg et al. 2000). In this context, uncertainty may benefit wage attainments if it leads to continued education, career development, and even enduring partnerships (Waite 1995). By contrast, uncertainty may diminish wages if it involves prolonged education without the acquisition of a degree, residential dependence, and frequent movement from job to job in the secondary labor market. Research also suggests that the long-term benefits of role exploration versus the detriments of aimlessness on future attainments are likely conditioned by preexisting social inequalities. We employ national data to test these competing hypotheses and determine whether uncertainty serves as a mechanism for role exploration or aimlessness.

## METHODS

### The National Education Longitudinal Study

Data for this study are from the NELS, which employed a two-stage stratified sampling design to select a nationally representative sample of eighth-graders during the spring of 1988. In the first stage, 1,057 schools were selected from a national sampling frame stratified by region, school type (public or private), urbanicity, and minority concentration. In the second stage, over 24,000 students in these schools, including oversamples of Asian and Hispanic students, completed base year surveys. The base year survey included an in-school student survey and interviews with respondents' parents. The first and second follow-up surveys were conducted at two-year intervals when respondents were in the 10<sup>th</sup> (1990) and 12<sup>th</sup> (1992) grades. These waves featured both student surveys and teacher surveys. At age 26, eight years after the scheduled date of high school graduation, respondents were reinterviewed. Information was collected on current school, family, and work roles, educational attainment, and occupational ambitions (age 26), as well as work histories and family formation behaviors in the years immediately following the scheduled date of high school graduation (ages 18 to 25).

Our analyses are based on data from youths who responded to the 1988, 1990, 1992, and 2000 surveys. Attrition across survey waves reduced the sample size to 12,144 respondents who completed the survey of 2000, and 10,827 respondents completed all four survey waves. The National Center for Education Statistics provides a weight that allows us to estimate parameters that describe the population of 8th-graders during the spring of 1988 (U.S. Department of Education 2002). The present analyses are based on data from respondents regarding their wage attainments, family roles, and educational achievement at



age 26, occupational aspirations at age 16, and measures of cognitive ability, teacher-rated effort, and socioeconomic origins. Of the 10,827 respondents who were not lost to attrition and who completed all four waves of data collection, approximately 86 percent were employed at the time of the 2000 survey administration. Approximately 29 percent of the remaining cases did not provide information on at least one of the predictor variables, which reduced our sample size to 6,228 respondents.

The correlation between our key outcome variable, hourly wages, and an indicator of missing data was low ( $r = -.02$ ) and not statistically significant. Nonetheless, to address potential bias resulting from item-missing data, we used multiple imputation—the statistical package Stata (the ICE procedure) (Royston 2005)—to regain respondents who were missing information on the predictor variables. We imputed values into five datasets, with all of the dependent and independent measures included in the imputation procedure (Rubin 1996). An advantage of the ICE procedure is that it uses an iterative multivariable regression algorithm that detects the distributions of model variables and applies the appropriate regression technique (e.g. OLS, logistic, or ordered logistic) in calculating imputed values. Following von Hippel (2007), we then deleted cases that were originally missing data on the outcome variable [i.e., multiple imputation, then deletion (MID)]. After imputation, our analysis sample included 10,827 respondents who were not lost to attrition and completed all four waves of data collection (i.e., 5,771 women and 5,056 men for each of the 5 combined datasets), with 4,515 women and 4,352 men who were employed at age 26.<sup>1</sup>

## Measures

**Wage attainments at age 26**—The outcome variable is the logarithm using base 10 of wages per hour for the respondent's current job at age 26. Respondents who were currently employed but reported zero wages were not included. In addition, if a respondent was employed in both a full-time and part-time job, only the wages of the full-time job were considered. If the respondent worked more than one part-time job, they were asked to report the wages and job characteristics of only the “primary or most important job.” Assessing wage attainments at age 26 is important for the analyses because it occurs after the period of emerging adulthood (age 18 to 25).

**Occupational uncertainty at ages 16 and 26**—Respondents were asked to choose one of sixteen broad occupational categories (including a “don't know” option) that were “closest to describing the job or occupation that you expect or plan to have when you are 30 years old.” Respondents were instructed that “even if you are not sure, mark your best guess.” Responses were coded into five broad categories: (1) professional (e.g., accountant, artist, athlete, registered nurse, engineer, librarian, writer, social worker, actor, actress, clergyman, dentist, physician, lawyer, scientist, college teacher, and politician); (2) non-

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<sup>1</sup>In supplemental attrition analysis, we find that occupational ambitions do not affect survey retention, which increases our confidence that any difference between uncertain and certain youth in wage attainment does not reflect differential attrition. However, we found that males were less likely to be retained than females; non-whites were less likely to be retained than whites; and youth with lower grade point averages in the 8<sup>th</sup> grade had a higher risk of survey attrition at age 26 than those youth who had higher grades. Furthermore, youth who had more established risk factors of high school dropout in the 8<sup>th</sup> grade (e.g., who resided in a single parent family, had low parent education, had a sibling drop out of high school, spent 3 or more hours alone, had limited English proficiency, and low family income) also had a higher risk of survey attrition than those youth who had experienced fewer of these risk factors.

professional, (3) not want to work or homemaker, (4) multiple occupations, and (5) uncertain (i.e., “don’t know”). Each category was coded separately as a dichotomous variable (e.g., “1” if professional and “0” if not professional). Approximately 45 percent of girls and 34 percent of boys aspired to hold professional jobs at age 30. Approximately 9 percent of youth were uncertain of their future career ambitions at age 16, and 3 percent of youth listed multiple future career choices.

Respondents were also asked at age 26 “what job or occupation do you plan to have when you are age 30?” The occupational aspirations were then grouped by the interviewers into 40 categories, with the most frequent responses being medical licensed professionals (5.8 percent), office managers (5.7 percent), and kindergarten through 12 teachers (5.3 percent). At age 26, 41 percent of women and 35 percent of men still aspired to hold professional jobs at age 30. In addition, approximately 9 percent of men and 11 of women were unsure at age 26 about what job they wanted to hold at age 30.

**Educational Attainment and Student Status at age 26**—Educational attainment comprised eight measures referencing the highest degree achieved by age 26: (1) high school dropout; (2) high school completion or GED recipient; (3) some college; (4) vocational or technical certificate; (5) Associates’ degree; (6) BA/BS degree; (7) Master’s degree; or (8) Ph.D. or professional degree. Approximately 37 percent of women and 28 percent of men had attained at least a BA/BS degree by age 26. Nationally, approximately 30 percent of 25- to 29-year-olds hold baccalaureate or higher-level degrees (U.S. Department of Education 2008).

It is clear that students are prolonging their educational careers into young adulthood, as 1 in 5 respondents in this dataset were attending a postsecondary school at age 26. Furthermore, consistent with concerns regarding the growing number of youth today who attend college but do not graduate (Kerckhoff 2002), approximately one-third of respondents in this sample had attended college and not completed a degree by age 26. Though our focus in this paper is on how uncertain career aspirations shape wage attainments, in analyses not shown, we found that approximately one quarter of youth who had uncertain aspirations during adolescence were “college dropouts” and not currently attending school in young adulthood. In contrast, this was the case for 20 percent of youth who had professional or non-professional aspirations.

**Employment and Family Status at age 26**—We control for a number of work and family roles at age 26 that signify and may confound the association between uncertain aspirations and wage attainments, including measures of occupational status, part-time work status, work stability, union formation, and whether the respondent was residing in their parent(s) home. For example, we include measures of whether the respondent was employed in a “professional” job (e.g., legal, medical, human services, science, technical, and computer system professionals) versus a non-professional job, and whether the respondent was employed part-time (coded 1=less than 35 hours per week) or full-time (coded 0=35 or more hours per week). Work stability is indicated by two measures: whether the respondent was employed 50 or more weeks in the prior year (coded 1=50 or more; 0=less than 50), and whether the respondent was employed at least six months in the prior year (coded 1=6 or



more; 0=less than 6). We also include dummy variables for number of children (coded 0=no children, 1=1 or more children) and whether the respondent was (1) single; (2) married; (3) divorced, separated, widowed, or (4) cohabiting in a “marriage like” relationship at the time of survey administration. Finally, we include a measure of whether the respondent was residing with their parents and not paying rent (approximately 9 percent of women and men). As stated previously, women and men with uncertain career aspirations may pay a wage penalty in adulthood if they work in part-time jobs, have unstable work histories, or reside in their parent(s)’ home. If so, these indicators of “aimlessness” may mediate some of the longer-term impact of uncertain ambitions on wages.

**Cognitive and Non-Cognitive Behaviors at age 16**—Clausen (1991a; 1991b; 1993) found that youth who were more competent and planful in their decision-making regarding future careers exhibited greater academic ability, dependability, and self-regulation in early adolescence. Models of socioeconomic attainment also highlight the positive impact of cognitive and non-cognitive school behaviors on long-term earnings (Farkas 2003; Lleras 2008). To gain leverage on this potential source of spuriousness, we include measures of academic ability (based on standardized test scores) and school effort (based upon teachers’ reports). Academic ability is the average of respondents’ standardized scores on a twenty-one-item reading comprehension test and a forty-item mathematics test, both administered in tenth grade. Effort is the average standardized score on two teachers’ reports during the 10<sup>th</sup> grade of whether the student usually works hard in class (response choices were “yes” or “no”), how often the student completes homework assignments, and how often the student is attentive in class (both 5-point scales ranging from “never” to “all of the time”). Some students’ scores are based on a single teacher’s report. The effort scale has high reliability for both teachers (Cronbach’s alpha ranged from .849 to .851). The two teachers’ ratings are highly correlated ( $r = .53$ ), considering that they are rating students in different classes.

**Sociodemographic Factors**—Analyses includes controls for gender, race/ethnicity (measured as a series of dummy variables for black, Hispanic, Asian, or Native American, with white as the reference category), and base year parent reports of total household income (15-point scale ranging from “none” to “\$200,000 or more”), father’s or mother’s highest education level (6-point scale ranging from “didn’t finish high school” to “Ph.D., M.D., or other”). Family structure is generated from respondents’ reports that they resided with both their biological mother and biological father in 1988 (two-parent vs. single-parent). Finally, we include a measure of parent(s) highest expectations for respondents’ education (also from the 1988 parent survey, ranging on a 12-point scale from “less than a high school diploma” to “Ph.D. or M.D.”). Table 1 shows the mean, percentages, and standard deviations of all variables in the observed and imputed datasets.

### Analysis Strategy

The analysis for this study proceeds in two stages. First, in order to determine which youths are uncertain about their future occupational aspirations, we use academic ability, school effort, and sociodemographic background factors to predict occupational uncertainty during adolescence (age 16). We also consider whether uncertainty in adolescence predicts occupational uncertainty ten years later (at age 26), even after controlling for these

background factors. Second, we use OLS regression to investigate the role of uncertain occupational aspirations in predicting wage attainments at age 26. In all of our analyses, we use the *survey* commands available in Stata 10 (StataCorp 2007) to correct our standard errors for complex survey designs (e.g., the sample design involved stratification, disproportionate sampling of certain strata, and clustered probability sampling). All models are estimated separately for women and men to account for gender differences in occupational aspirations as well as school, work, and family roles during the early occupational career.

## RESULTS

In Table 2 we present logistic regression estimates predicting uncertain ambitions in adolescence (age 16) and in young adulthood (age 26). These analyses include 10,827 respondents who completed all four survey waves, regardless of whether they were employed at age 26. In the short-term, we find that only low school effort in the classroom increases the odds of occupational uncertainty among boys at age 16. However, youth who are uncertain at age 16 are especially likely to be uncertain ten years later, even after controlling for background factors. For instance, women and men who express occupational uncertainties at age 16 are 64 and 94 percent more likely, respectively, to be uncertain at age 26 of their future career. Women, but not men, whose parents have high educational expectations for them and high incomes are also less likely to be uncertain at age 26 than women whose parents have low expectations and low income. Asian women are also more likely than white women to be uncertain at age 26.

Table 3 presents OLS regression estimates predicting log wages at age 26. In Model 1, we compare the wage attainments of young adults with differing occupational aspirations at age 16. At age 26, women and men with uncertain aspirations have significantly lower wages than those youth with professional aspirations ( $b_{\text{women}} = -.041$  and  $b_{\text{men}} = -.046$ ). To test whether the effects of uncertain aspirations on wages are different for women and men, we followed Clogg, Petkova, and Haritou (1995) and used z-tests to compare the equality of the coefficients shown in Model 2. The z statistics for the gender differences between the regression coefficients of uncertain ambitions are not statistically significant ( $z = 1.11$ ;  $p > .10$ ). Thus, the results show little difference by gender in the prevalence of uncertain ambitions or its impact on wages in young adulthood. Women, but not men, also experience a wage penalty for non-professional aspirations or not wanting to work in adulthood. For both women and men, household income at age 14 is positively related to wages at age 26. Unlike the non-significant results for boys, girls with higher academic ability in adolescence and parents with higher educational expectations for them have higher wages in young adulthood than girls with lower test scores and whose parents have lower long-term expectations for them.

In Model 2, including controls for educational attainment, current employment status and family roles, and other background factors reduces the estimate of uncertain ambitions on wage attainments for women but not for men. Nonetheless, women and men with uncertain aspirations still have significantly lower wages in young adulthood. The remaining estimates in Model 2 show few surprises. Women and men earn higher wages if they are (1) employed

at least six months in the prior two years, (2) employed 50 or more weeks in the past year, (3) employed in a professional job, and (4) not attending school or residing with their parents. Men earn higher wages if they hold a BA/BS degree or higher, whereas women's wages also improve with some college, vocational/technical degrees, and associates degrees. We find that women, but not men, earn higher wages if they are divorced (vs. single). Moreover, consistent with prior research (Budig and England 2001; Waldfogel 1997), women also earn significantly lower wages if they have two or more children (vs. none).

Finally, in Table 4 we show the estimated effects of uncertain ambitions at age 16 and 26 on hourly wages in young adulthood. Young adults who express uncertain occupational ambitions at age 26 have significantly lower hourly wages at age 26, even after controlling for educational attainment, work characteristics and experiences, and family roles. Interestingly, youth who are uncertain at age 16 still have significantly lower wages in young adulthood compared to those with professional aspirations.

### Alternative Specifications

In a series of models shown in the Appendix, we examined whether the effects of uncertain aspirations varied by socioeconomic background (i.e., parent(s) education and family income), academic ability, school effort, and the expectations of significant others. We expected that youth from lower SES families may have fewer resources to utilize role exploration to promote attainment, whereas youth whose parents provide them with resources may have more opportunities to delay their transition to adulthood and find careers that best fit their developing interests. Youth who have high ability, motivation, or significant others' expectations may also benefit from occupational uncertainty. As shown in the Appendix, some of the interactions between uncertainty and socioeconomic background (i.e., family income and parent(s) highest educational degree), academic ability, teacher-rated effort, and significant others' expectations implied less of a penalty from uncertain ambitions among youth who had more resources or abilities, though overall, only one of the ten interaction coefficients were statistically significant ( $p < .10$ ). Compared to women with less educated parents, those women whose parents had higher levels of education were not penalized as much for holding uncertain aspirations at age 16. We also considered whether uncertainty at age 16 is more or less beneficial to the wages of respondents who eventually work in professional jobs at age 26, compared to the effect of uncertainty on those who work in non-professional jobs. As shown in the Appendix, we did not find that the interaction between uncertain ambitions at age 16 and holding a professional job at age 26 had a statistically significant effect on hourly wages for either women or men.

For the analyses shown in Table 3, we considered alternative specifications of our outcome variable by limiting our sample to women and men who were not currently attending school at age 26 (not shown). This model specification slightly increased the negative impact of uncertainty on log wages for women ( $b_{\text{uncertain}} = -.030$ ; t-statistic =  $-2.07$ ) and men ( $b_{\text{uncertain}} = -.048$ ; t-statistic =  $-2.87$ ) in the full model, which suggests that uncertain aspirations yield even lower wages among young people who do not prolong their education or return to school in young adulthood. We also examined the impact of uncertain ambitions among young adults who were working full-time and not attending school. In this model

specification, the effect of uncertain ambitions on wages increased slightly for women ( $b_{\text{uncertain}} = -.031$ ;  $t\text{-statistic} = -2.19$ ). The effect of uncertainty on male log wages dropped by approximately one-third, yet remained statistically significant ( $b_{\text{uncertain}} = -.028$ ;  $t\text{-statistic} = -1.71$ ). For males, the negative impact of uncertain aspirations was reduced through the acquisition of full-time employment.

Though we focused on how uncertain career aspirations shape wage attainments in this paper, we also considered whether uncertain aspirations in adolescence predicted post-secondary school attendance and educational attainment at age 26. For the approximately 22 percent of respondents attending school at age 26, the pursuit of an advanced degree may be an alternative measure of future attainments, especially if they were not employed at that time (and thus excluded from our analyses of wage attainments). In analyses not shown, we found that women and men with uncertain aspirations in adolescence were approximately 18 percent less likely to be attending school at age 26 than those who held professional aspirations, even after controlling for academic ability, effort, and sociodemographic background factors (i.e.,  $b_{\text{uncertain}} = -.197$ ,  $s.e.=.092$ ,  $p=.032$ ). We also found that uncertain youth had significantly lower levels of educational attainment (i.e., measured on a seven-point scale ranging from “less than high school” to “Masters, Ph.D., or Professional degree”) than youth who held professional aspirations ( $b_{\text{uncertain}} = -.223$ ,  $s.e.=.10$ ,  $p=.039$ ). Thus, early occupational uncertainty appears to disrupt wage attainments, educational attainment, and the pursuit of an advanced degree at age 26.

Finally, though our analyses controlled for important sources of spuriousness (e.g., socioeconomic background, school effort, academic ability, family structure, and parental expectations), it is noteworthy that our substantive results were unchanged by the addition of controls for delinquency (a composite measure of fighting, substance use, and arrest), number of siblings, and geographic region, as well as educational expectations, extracurricular activities, educational track, and school attachment (a composite measure of whether the respondent felt that the teaching at their school was good, teachers were interested in students, and most teachers listened to the respondent).

## DISCUSSION

Adolescence is often viewed as a time of role exploration and refinement of educational and career choices. Yet evidence shows that many young people in the United States do not have clear occupational aspirations. Arnett’s concept of emerging adulthood suggests this uncertainty reflects the increasing volatility in the timing and sequencing of family, school, and work roles. From this perspective, role exploration during emerging adulthood helps young people find their way toward longer-lasting intimate relationships, lifelong learning, and more satisfying careers in adulthood. However, scholars in the sociology of education have expressed concern that teenagers in the United States are increasingly directionless in their planning for future careers (Reynolds et al. 2006; Rosenbaum 2001; Schneider and Stevenson 1999). This contrary perspective is that the hallmarks of role exploration instead reflect the tendency of young people today to: (1) flounder in an increasingly bifurcated labor market with weak institutional connections between school and work; (2) flounder in school by giving little thought to the necessary steps to achieve lofty career aspirations; and

(3) to be unable to achieve financial independence, especially among the increasing number of youth who do not finish college yet still incur high financial debt. Though extended and disorderly transitions during young adulthood may provide capital accumulation in terms of experiencing a variety of jobs and occupational roles, through building job networks, and by being more flexible and adaptive in an uncertain labor market (i.e., “identity capital, see Côté and Levine 2002), as Bynner (2005) noted, “capital accumulation becomes consolidated through the development of *clear* occupational career tracks” (p. 370).

This study addressed a simple question: *do uncertain career aspirations at age 16 affect wage attainments ten years later?* The answer is yes. Using nationally representative data from a cohort of young women and men, we find that approximately 10 percent of youth do not know what job they want to hold in young adulthood. Girls and boys who report uncertain occupational aspirations at age 16 have significantly lower wages ten years later than youth with professional aspirations. These associations are reduced when controls for academic ability, school effort, SES and race/ethnicity, and measures of educational attainment and family formation in young adulthood are taken into account, but the effects of uncertain aspirations remain strong and statistically significant. Below we address a question raised by these findings that is important for understanding the transition from adolescence to adulthood.

### **Why might uncertain aspirations in adolescence lead to diminished long-term success in the labor market?**

Career aspirations reflect a young person’s perceived talents and future potential and uncertain aspirations may indicate a deficiency in abilities or skills that affect longer-term success in the labor market. Supply-side theoretical approaches look to individual preferences, abilities, credentials, and occupational aspirations to explain workers’ longer-term employment prospects and earnings. We find that early career uncertainty is negatively associated with school effort only among young men. Perhaps young men who are uncertain about future careers may lack the motivation, ability, self-esteem, or confidence to secure a high paying job in young adulthood (Savickas 2002). Moreover, they may also lack perseverance and “stick-to-itiveness.” In turn, these character traits may lead to frequent job changes and career shifts during the school to work transition, undermining the development of job skills and eroding the effect of work experience on longer-term wage attainments.

Yet, among young women, there are not any significant predictors of uncertain aspirations at age 16 (Table 2). One possible interpretation for the lack of findings related to why young women develop uncertain aspirations is that the process of deciding on a career may be more complicated for young women than young men. Gender differences in adolescent value orientations, gender-role attitudes, family behaviors and intentions, and lifestyle preferences (Hakim 2002) may make it more difficult for young women than young men to define a career path. Thus, compared to men, early occupational uncertainty may not necessarily reflect a shortcomings on the part of the adolescent (i.e., low ability, low school effort, etc.). Nonetheless, holding uncertain aspirations would still be detrimental to young women’s career trajectories.

Uncertain aspirations may also affect both the informal and institutional channels through which youth find jobs. According to Granovetter (1995), informal contacts can lead to higher wages through the transmission of information about job opportunities. Casual acquaintances (i.e., weak ties) are more likely than close friends or relatives (i.e., strong ties) to provide new information about job opportunities. In addition, work contacts that occur earlier in the career can accumulate and lead to better job contacts later in the career, which can increase the chances of finding quality jobs with higher wages. Youth who are uncertain of their future occupational pursuits may be unable to develop contacts in particular careers or industries beneficial for career development and long-term wage attainments.

Uncertainty may also affect the institutional ties young people use to obtain jobs. Rosenbaum and his colleagues (Rosenbaum et al. 1999; Rosenbaum 2001) have emphasized the importance of institutional job contacts (e.g., schools, employment agencies, etc.) for early career wage attainment, especially among disadvantaged youths. For example, for youth who did not attend college, researchers have shown school contacts to benefit long-term earnings, whereas employment agencies increase earnings only in the year immediately following high school (Rosenbaum 2001). Youths from disadvantaged backgrounds are more likely than those from higher socioeconomic backgrounds to use institutional contacts to find jobs (Rosenbaum et al. 1999); however, high school graduates and dropouts who are uncertain in their future goals may be less likely to take advantage of such services, like career placement programs that are offered by schools to help place new graduates, which could put them at an even greater disadvantage.

Employers are also a source of institutional contacts that can promote career advancement through internal promotions and job referrals to other employers. “Demand-side” theoretical approaches typically rely upon the characteristics of employers, firms, and industries to explain workers’ longer-term employment prospects and earnings. Rosenbaum and his colleagues (Person, Rosenbaum, and Deil-Amen 2005; Rosenbaum 2001) contend that employers often do not consider school performance or teacher recommendations when considering a job applicant. Instead, employers may place more emphasis on work history and youth with uncertain career ambitions may not have a history of steady work. As a result, employers may discriminate against youth who are uncertain about career goals because they suspect these youth are less productive than youth with clear goals. Youth with uncertain career ambitions may also be perceived as irresponsible or unreliable, and unlikely to remain with the employer.

Although we find evidence that youth who are uncertain about their aspirations in adolescence are likely to remain uncertain ten years later, and that occupational uncertainty is associated with diminished socioeconomic attainment, we remain cautious in making any claims about the efficacy of role exploration as a mechanism leading to higher wages in early adulthood. Uncertainty concerning job aspirations does not appear to be a good proxy for strategic and holistic role exploration, but the data do not directly speak to role exploration itself. It is still possible a minority of young people may engage in strategic role exploration that is indeed beneficial to their occupational careers. Moreover, the NELS dataset only follows respondents up to age 26. Thus, it is certainly plausible that occupational uncertainty may benefit wage attainments in adulthood. The data simply



suggests that if this hypothetical minority exists, it is not best captured by those with uncertain occupational aspirations in adolescence.

Though we focused on respondents who “don’t know” their future careers, youth who reported multiple career choices may also be viewed as uncertain. In our sample, approximately 3 percent of women and men at age 16 listed multiple future occupations they aspired to hold at age 30; these women and men who aspired to multiple occupations attained wages that were lower than those who aspired to professional jobs (though these differences were not statistically significant). Absent the actual surveys, we were not able to discern the percentage of respondents with multiple occupations aspiring to only professional jobs, or whether the majority aspired to professional and non-professional jobs. The later category would suggest a greater degree of occupational uncertainty, and future research with more detailed occupational aspiration measures should explore how multiple aspirations affect long-term attainments.

Throughout this paper, we have made the assumption that youth who indicate they would like to work in a professional or non-professional job in adulthood have “certain” occupational aspirations, compared to those youth who “don’t know” their occupational aspirations. Yet, for at least some of the youth who aspire to professional work in adulthood, this certainty in occupational aspirations may still be unrealistic. Research clearly shows that adolescents have increasingly become overly ambitious in their aspirations, and many youth may be certain that they can achieve more than is possible (see Baird, Burge, and Reynolds 2008 for a review). Though we demonstrate in this paper a statistically significant difference in longer-term socioeconomic attainment among youth who were uncertain and those who aspired to professional jobs, lofty ambitions for at least a subgroup of those adolescents were likely to be certain but unrealistic.<sup>2</sup>

The findings presented here suggest several additional avenues for future research on the process of socioeconomic attainment among recent cohorts of youth. First, researchers who are interested in emerging adulthood must continue to address the role of social inequalities in structuring the transition to adulthood (Bynner 2005; see also Furstenberg 2006). In this study, the effects of uncertain aspirations on early wage attainments did not vary by social origins, gender, ability, effort, and expectations of significant others. Future research should consider whether high ambitions, instability in work and school, and tentative commitments to work and family roles during this period of the life course have disparate effects on long-term attainment depending on prior levels of inequality. Second, we cannot determine whether uncertain career aspirations in adolescence reflect some other unmeasured trait that affects success in the labor market, such as perseverance, motivation, or “planful competence” (Clausen 1991a; 1991b). Though we control for educational achievement, cognitive ability, school effort, and social class background, future research should consider fixed-effects analyses to rule out potential sources of unobserved heterogeneity.

In addition, further research is required to distinguish the mechanisms connecting uncertain aspirations to labor-market outcomes and, in particular, to explore how uncertain aspirations

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<sup>2</sup>We are grateful to an anonymous reviewer for this insight.

shape informal and institutional job contacts during the transition from school to work. Researchers should also address the role of uncertain ambitions in societies that have more structured school-to-work transitions, such as Germany and Japan (Hamilton 1990; Kerckhoff 1998; Rosenbaum et al. 1990). The connections between teachers and employers may help youth in these countries better utilize uncertainty as a form of role exploration to promote long-term attainment.

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**Table 1**

Means, Standard Deviations, and Percentages for Observed and Imputed Data by Gender

Variables	Women		Men	
	Observed	Imputed	Observed	Imputed
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
<i>Outcome</i>				
Hourly Wages, age 26 (log base-10)	1.060 (.22)	1.054 (.22)	1.126 (.21)	1.125 (.21)
<i>Occupational Ambitions (Age 16)</i>				
Uncertain	8	9	9	9
Multiple Occupations	3	3	3	3
Non-Professional Job	38	36	50	51
Professional	48	45	36	34
Not to Work	3	3	0	0
Refusal	1	3	1	3
<i>Background Factors (age 14)</i>				
Parent(s) Education	3.144 (1.21)	3.017 (1.25)	3.214 (1.15)	3.126 (1.19)
Family Income	9.864 (2.49)	9.645 (2.66)	10.058 (2.25)	9.813 (2.39)
Parent(s) Educational Expectations	8.973 (2.60)	8.766 (2.80)	8.876 (2.49)	8.595 (2.69)
Black	11	13	10	11
Hispanic	9	11	9	10
Asian	3	3	3	3
American Indian	1	1	1	1
White	76	73	78	74
Single Parent	29	33	27	32
<i>Academic Behaviors (age 16)</i>				
Academic Ability	.177 (.89)	.052 (.98)	.115 (.89)	-.039 (.95)
Teacher-rated effort	.673 (2.18)	.397 (2.36)	-.362 (2.38)	-.520 (2.44)
<i>Educational Attainment (age 26)</i>				
< High School	1	4	3	6
High School/GED	12	12	16	16
Some College	27	30	34	34
Vocational/Technical	9	10	6	8
Associates	9	8	8	7
Baccalaureate	37	32	30	25
Masters, Ph.D., or Professional	6	5	3	3
Current Student Status	22	22	21	20
<i>Work Experience and Current Job Hours (age 26)</i>				
Employed 6+mo. in past 2yrs	95	94	97	96
Employed 50+wks in past yr	71	70	78	77
Part-time hrs in current job	19	19	9	10
Professional job	17	15	13	12
<i>Family Roles (age 26)</i>				



Variables	Women		Men	
	Observed	Imputed	Observed	Imputed
	<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>
Reside in parental home	9	9	10	9
Single	50	48	58	58
Married	43	41	36	35
Cohabiting	1	1	1	1
Separated, Divorced, or Widowed	6	9	4	6
No Children	64	58	70	67
One Child	20	22	17	18
Two Children	12	14	10	11
Three or more children	4	6	3	4
Uncertain occ. ambitions (age 26)	11	11	9	9
Sample size	3,169	4,515	3,059	4,352

**Table 2**

Logistic Regression Estimates of Uncertain Aspirations at Age 16 and 26

Variables	Women				Men							
	Age 16	t-ratio	Exp(b)	t-ratio	Age 26	t-ratio	Exp(b)	t-ratio	Age 16	t-ratio	Exp(b)	t-ratio
<i>Background Factors</i>												
Parent(s) Education	.96	-.64	1.00	-.05	1.04	.50	1.07	.77				
Family Income	.96	-1.18	.94	-2.10*	.97	-.60	.97	-.66				
Parent(s) Educational Expectations	.96	-1.55	.94	-2.47*	.94	-1.47	1.03	.80				
Black (vs. white)	.56	-1.81	.80	-1.12	1.37	.78	.99	-.03				
Hispanic	1.10	.43	.97	-.15	.93	-.22	.83	-.66				
Asian	1.30	.52	1.89	2.02*	1.18	.56	1.24	.82				
American Indian	.45	-1.59	1.30	.40	.16	-1.77	.89	-.18				
Single Parent (vs. 2-parent)	1.01	.05	.91	-.75	.78	-1.30	1.31	1.53				
<i>Academic Behaviors</i>												
Academic Ability	.86	-.92	.92	-.97	.99	-.08	.97	-.30				
Teacher-rated effort	.93	-1.55	.96	-1.20	.92	-2.87**	.98	-.59				
Uncertain ambitions at age 16			1.64	2.81**			1.93	2.21*				
Sample Size	5,771				5,056							

Note.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$

**Table 3**

OLS Regression Estimates Relating Age 16 Aspirations to Hourly Wages at Age 26

Variables	Women				Men			
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<i>Occupational Ambitions (Age 16)</i>								
Uncertain (vs. Professional job)	-.041	-3.04***	-.025	-2.09*	-.046	-2.92**	-.046	-3.08***
Multiple Occupations	-.043	-1.74	-.037	-1.53	-.086	-1.99*	-.068	-1.65
Non-Professional Job	-.042	-4.01***	-.028	-2.87**	-.002	-.17	-.002	-.18
Not to Work	-.072	-2.99**	-.047	-2.28*	-.067	-1.31	-.058	-1.07
Refusal	-.004	-.06	-.021	-.67	.000	.01	.006	.28
<i>Background Factors (age 14)</i>								
Parent(s) Education	-.001	-.13	-.006	-1.75	-.005	-.89	-.009	-1.62
Family Income	.015	6.28***	.011	5.61***	.015	5.22***	.014	5.31***
Parent(s) Educational Expectations	.006	3.30***	.003	1.78	.002	.99	.000	.12
Black (vs. white)	.003	.17	.010	.57	-.061	-2.94**	-.047	-2.63**
Hispanic	.031	2.13*	.050	3.85***	-.020	-1.04	-.005	-.27
Asian	.036	1.88	.039	2.23*	.033	2.00*	.035	2.15*
American Indian	-.050	-1.52	-.024	-1.03	-.024	-.63	-.001	-.04
Single Parent (vs. 2-parent)	-.009	-.79	.004	.44	.010	.89	.018	1.66
<i>Academic Behaviors (age 16)</i>								
Academic Ability	.039	4.67***	.016	2.11*	.012	1.81	.002	.39
Teacher-rated effort	.001	.45	-.006	-2.62**	.005	1.73	.000	.15
<i>Educational Attainment (age 26)</i>								
< High School (vs. high school/GED)			-.063	-2.94**			-.055	-1.71
Some College			.027	2.02*			-.013	-1.08
Vocational/Technical			.034	2.22*			-.021	-.99
Associates			.024	1.15			.009	.53

Variables	Women				Men			
	Model 1		Model 2		Model 1		Model 2	
	b	t-ratio	b	t-ratio	b	t-ratio	b	t-ratio
Baccalaureate	.112	8.18***	.112	8.18***	.048	3.25**	.048	3.25**
Masters, Ph.D., or Professional	.193	9.53***	.193	9.53***	.135	5.71***	.135	5.71***
Current Student Status	-.019	-2.06*	-.019	-2.06*	-.044	-3.60***	-.044	-3.60***
<i>Work Experience and Current Job Hours (age 26)</i>								
Employed 6+mo. in past 2yrs (vs. < 6 mo.)	.051	3.09**	.051	3.09**	.072	3.99***	.072	3.99***
Employed 50+wks in past yr (vs. < 50 wks.)	.069	8.44***	.069	8.44***	.042	3.90***	.042	3.90***
Part-time hrs in current job (vs. full-time)	.017	1.50	.017	1.50	.017	.67	.017	.67
Professional job (vs. non-professional)	.069	5.02***	.069	5.02***	.077	5.13***	.077	5.13***
<i>Family Roles (age 26)</i>								
Reside in parental home (vs. not w/parents)	-.031	-2.69**	-.031	-2.69**	-.060	-3.24**	-.060	-3.24**
Married (vs. Single)	.006	.77	.006	.77	.018	1.58	.018	1.58
Cohabiting	-.019	-.48	-.019	-.48	.004	.15	.004	.15
Separated, Divorced, or Widowed	.042	2.31*	.042	2.31*	-.006	-.25	-.006	-.25
One Child (vs. none)	-.024	-1.94	-.024	-1.94	-.005	-.37	-.005	-.37
Two Children	-.029	-2.05*	-.029	-2.05*	-.008	-.48	-.008	-.48
Three or more children	-.062	-3.31***	-.062	-3.31***	.006	.17	.006	.17
Intercept	.880		.798		.994		.908	
Sample Size	4,515		4,515		4,352		4,352	
R <sup>2</sup> (ranging across the five datasets)	.138 to .146		.249 to .255		.071 to .077		.139 to .143	

Note.

\* p < .05,

\*\* p < .01,

\*\*\* p < .001

Table 4

OLS Regression Estimates Relating Uncertain Aspirations at Age 16 and 26 to Hourly Wages at Age 26

Variables	Women		Men	
	<i>b</i>	<i>t-ratio</i>	<i>b</i>	<i>t-ratio</i>
<i>Occupational Ambitions (Age 16)</i>				
Uncertain (vs. Professional job)	-.023	-1.96*	-.042	-2.79**
Multiple Occupations	-.037	-1.54	-.069	-1.69
Non-Professional Job	-.027	-2.83**	-.001	-.14
Not to Work	-.044	-2.09*	-.053	-1.01
Refusal	-.018	-.56	.008	.33
<i>Background Factors (age 14)</i>				
Parent(s) Education	-.006	-1.62	-.008	-1.53
Family Income	.011	5.55***	.014	5.32***
Parent(s) Educational Expectations	.003	1.72	.000	.16
Black (vs. white)	.010	.53	-.046	-2.60**
Hispanic	.051	3.89***	-.005	-.28
Asian	.040	2.24*	.036	2.21*
American Indian	-.027	-1.15	-.003	-.08
Single Parent (vs. 2-parent)	.004	.41	.020	1.78
<i>Academic Behaviors (age 16)</i>				
Academic Ability	.017	2.19*	.003	.40
Teacher-rated effort	-.006	-2.57*	.001	.20
<i>Educational Attainment (age 26)</i>				
< High School (vs. high school/GED)	-.060	-2.80**	-.056	-1.74
Some College	.026	1.96*	-.013	-1.07
Vocational/Technical	.031	2.06*	-.019	-.91
Associates	.021	.99	.008	.47
Baccalaureate	.107	7.83***	.048	3.17**
Masters, Ph.D., or Professional	.185	9.14***	.133	5.57***
Current Student Status	-.021	-2.36*	-.046	-3.70***
<i>Work Experience and Current Job Hours (age 26)</i>				
Employed 6+mo. in past 2yrs (vs. < 6 mo.)	.050	3.00**	.074	4.07***
Employed 50+wks in past yr (vs. < 50 wks.)	.069	8.49***	.041	3.79***
Part-time hrs in current job (vs. full-time)	.017	1.51	.016	.63
Professional job (vs. non-professional)	.068	5.00***	.075	5.01***
<i>Family Roles (age 26)</i>				
Reside in parental home (vs. not w/parents)	-.029	-2.61**	-.059	-3.17**
Married (vs. Single)	.004	.50	.015	1.37

Variables	Women		Men	
	<i>b</i>	<i>t-ratio</i>	<i>b</i>	<i>t-ratio</i>
Cohabiting	-.019	-.49	.002	.08
Separated, Divorced, or Widowed	.042	2.36*	-.006	-.25
One Child (vs. none)	-.024	-1.99*	-.005	-.34
Two Children	-.031	-2.18*	-.008	-.49
Three or more children	-.061	-3.30***	.005	.13
<i>Occupational Ambitions (Age 26)</i>				
Uncertain (vs. other)	-.046	-4.14***	-.046	-3.74***
Intercept	.810		.909	
Sample Size	4,515		4,352	
R <sup>2</sup> (ranging across the five datasets)	.255 to .260		.143 to .147	

Note.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$



## Alternative Specifications of OLS Regression Estimates Relating Uncertain Aspirations at Age 16 to Hourly Wages at Age 26

## Appendix

Women	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6			
	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	
<i>Main Effects</i>																			
Uncertain (age 16)	-.029	(.013)	-2.14	-.076	(.035)	-2.16	-.065	(.028)	-2.36	-.033	(.041)	-.80	-.024	(.012)	-1.99	-.023	(.012)	-1.96	
Professional Job (age 26)	.073	(.015)	4.95																
Parent(s) Educ Expect				.002	(.002)	1.07													
Parent(s) Education							-.007	(.004)	-1.95										
Family Income										.011	(.002)	5.26							
Academic Ability													.017	(.006)	2.70				
Teacher-rated effort																-.006	(.002)	-2.57	
<i>Interaction Effects</i>																			
Uncertain * Professional Job	.032	(.034)	.93																
Uncertain * Par Educ Expect				.006	(.004)	1.59													
Uncertain * Par Educ							.014	(.008)	1.73										
Uncertain * Fam Inc										.001	(.004)	.21							
Uncertain * Ability													.008	(.012)	.69				
Uncertain * Effort																.002	(.006)	.36	
Sample size																			
				4,515			4,515			4,515			4,515			4,515			4,515
<b>Men</b>																			
<i>Main Effects</i>																			
Uncertain (age 16)	-.035	(.016)	-2.22	.021	(.042)	.51	-.026	(.039)	-.66	-.010	(.079)	-.12	-.043	(.015)	-2.94	-.043	(.015)	-2.91	
Professional Job (age 26)	.084	(.016)	5.28																
Parent(s) Educ Expect				.002	(.002)	.81													
Parent(s) Education							-.010	(.006)	-1.87										
Family Income										.015	(.003)	5.88							
Academic Ability													.003	(.006)	.51				
Teacher-rated effort																.001	(.003)	.19	
<i>Interaction Effects</i>																			

Men Main Effects	Model 7			Model 8			Model 9			Model 10			Model 11			Model 12				
	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio	b	se	t-ratio		
Uncertain * Professional Job	-.058	(.037)	-1.55																	
Uncertain * Par Educ Expect				-.008	(.005)	-1.63														
Uncertain * Par Educ							-.005	(.012)	-.47											
Uncertain * Fam Inc										-.003	(.008)	-.45								
Uncertain * Ability													-.014	(.016)	-.88					
Uncertain * Effort													.000	(.006)					-.04	
Sample size																				4,352

Note. Models include all variables from Table 4 (estimates not shown)