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# **Origins and Outcomes of Judgments about Work**

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### **Abstract**

We evaluate the importance of judgments about work for the attainment process in the "new economy." Findings show continuing links between social origins and work orientations at age 21/22, as well as significant impacts of work orientations on occupational outcomes at age 31/32. Higher socioeconomic status background, and stronger self-perceived ability, are tied to weaker extrinsic orientations. Young women are more intrinsically oriented than young men. Stronger intrinsic orientations predict holding jobs that offer more intrinsic rewards, self-direction, and security. Stronger extrinsic orientations predict higher biweekly earnings (largely via work hours), but not more prestigious, better paying, or more secure jobs. Judgments about work, and especially intrinsic orientations, thus remain important precursors of occupational attainments, despite economic turbulence and change in the transition to adulthood.

A rockbed tenet of sociological analysis is that individual behavior is rooted in goal-directed action (Mead 1934; Weber 1947); in recent years, life course scholars have elaborated this premise as a manifestation of agency (Elder and Shanahan 2006; Settersten 2003). Individuals strive to construct future life pathways and outcomes through their choices and activities (Elder, Johnson and Crosnoe 2003). It is well recognized, however, that such individual agency is "bounded" by the constraints and opportunities posed by social location and historical period (Shanahan 2000). Interest in the manner in which goals affect outcomes has animated the study of occupational choice and intergenerational mobility for a long time. We revisit this issue in the present study of social origins, judgments about work, and occupational attainments in a contemporary cohort of young adults.

Given the importance of occupation in establishing a person's status in the community, life style, and identity, a large body of research in the status attainment tradition is directed to understanding adolescents' educational and occupational aspirations as crucial links between the family of origin's social class background and adult socioeconomic achievement (Kerckhoff 1974; Sewell and Hauser 1975). Extending this line of research, sociologists recognize that diverse psychological orientations, including values, self-efficacy, and other self-concepts, influence youth's occupational success and serve as bridges between social origins and work outcomes (Mortimer 1996). Ideas about the desirability of various occupational rewards or conditions of work are key among these orientations, as they are thought to drive occupational choices and the subsequent acquisition of occupational roles (Davis 1964; Rosenberg 1957).

Whereas research in the status attainment tradition has focused on the earnings and prestige of occupations, it is evident that multiple features make work rewarding, 'desirable,' or at

the other extreme, 'bad' (e.g., Jencks, Perman, and Rainwater 1988; Kalleberg, Reskin and Hudson 2000). Dating back to the 1950s, scholars have examined individual orientations toward multidimensional work rewards and their relation to career choice and work experience (e.g., Herzberg, Mausner, and Snyderman 1959; Rosenberg 1957). These orientations, referred to as both "judgments about work" (Kohn and Schooler 1969) and job, occupational, or work "values" (eg., Johnson 2002; Kalleberg 1977; Marini et al. 1996; Mortimer and Lorence 1979), indicate the extent to which people want jobs that are high paying, allow creative expression, offer security, and so on.

Despite these long-standing research traditions focused on orientations and outcomes, recent scholarly commentary raises doubts about the continued significance of young people's orientations in directing the further course of their lives. Rapid social change, including what some have called the "destandardization" of the life course, has diversified pathways and increased opportunities to change course midstream (Buchmann 1989; Shanahan 2000; Shanahan and Macmillan 2008). At the same time, individual discretion may have become more important as paths to adulthood and adult achievements have become less bound by familial ties and tradition. Individualization expands personal choice, but in an increasingly complex environment (Brückner and Mayer 2005; Buchmann 1989). A rapidly changing economy has made future job opportunities hard to predict. Adolescents' expectations are rising, perhaps unrealistically, with respect to both educational and occupational attainment (Reynolds et al. 2006). Educational goals have become less closely tied to socioeconomic background (Goyette 2008) and less predictive of eventual educational attainment (Reynolds et al. 2006). Young people remain in school longer and move frequently between school and work (Kerckhoff 2002; Schoon and Silbereisen 2009). Arnett (2004) argues that "emerging adulthood" is now a lengthy period in which young people's commitments to roles remain weak while they explore their interests and options, well into their twenties. In the context of these interrelated economic and social changes, questions abound about the connections between individual orientations and subsequent outcomes for today's adolescents. With a growing diversity of pathways available, and less ability to predict the future, can recent cohorts actualize their preferences for occupational conditions and rewards?

In this article, we examine the interrelations among intrinsic and extrinsic judgments about work, social origins, and adult achievements, evaluating the extent to which judgments about work are reflective of social origins and predictive of occupational attainment. Intrinsic orientations refer to the degree of importance individuals attach to the rewarding nature of job tasks themselves (e.g., opportunity to express one's interests and abilities). Extrinsic orientations refer to the importance attached to features of jobs that are means to other ends or provide workers with more or less desirable working conditions (e.g., pay). Judgments about work are thus conceptualized along two dimensions, which capture individual differences in the importance attached to extrinsic and intrinsic work rewards respectively. Intrinsic and extrinsic judgments about work, however, are not conceptualized as opposite ends of a single continuum. Instead, individuals can be high or low on both (just as jobs may offer high or low levels of both intrinsic and extrinsic rewards).

### Social Origins and Judgments about Work

Judgments about work take shape initially in adolescence (Mortimer et al. 1996). Although they are by no means static thereafter, they show increasing stability in the years after high school (Johnson 2001b). Intrinsic and extrinsic orientations vary along a number of aspects of social origin, including parental socioeconomic status (Johnson 2002; Kohn and Schooler 1969; Lindsay and Knox 1984; Mortimer et al. 1996). Intrinsic rewards are found to be of more central concern, and extrinsic rewards less so, for persons of more privileged origins, who may be able to take extrinsic rewards for granted. According to Maslow's (1954) hierarchy of needs, when basic material security is established, individuals can focus on

higher order needs such as intellectual stimulation and self-actualization (e.g., Loscocco 1989; Martin and Tuch 1993).

In his now classic study, *Class and Conformity*, Kohn (1969) further illuminated the linkage between socioeconomic status and judgments about work. Kohn reasoned that parents are interested in instilling in their children the very orientations that enabled them to be successful in their own jobs. Social class thus influences how parents socialize their children to evaluate job rewards (Kohn and Schooler 1969). Middle class parents more often work in jobs that provide intellectual stimulation and enable independent decision-making. They value self-direction and a reliance on internal standards of behavior, fostering orientations toward intrinsic work rewards (Martin and Tuch 1993). Working class parents are more likely to have jobs that place a premium on following directions and rules established by others. Consistently, working class parents emphasize conformity and reliance on external standards of worth, fostering high evaluations of extrinsic work rewards.

Consistent with Kohn's reasoning, parental socioeconomic status is negatively associated with both adolescents' and adults' extrinsic orientations, defined varyingly to include evaluations of pay, prestige, high regard, and job security (Johnson 2002; Kohn and Schooler 1969; Lindsay and Knox 1984; Mortimer et al. 1996). Socioeconomic origin is positively associated with intrinsic orientations, referencing rewards such as learning opportunities, autonomy, decision-making authority and challenge (Johnson 2002; Kohn and Schooler 1969; Lindsay and Knox 1984; Mortimer et al. 1996). Other research suggests that parental judgments about work are more likely to influence adolescent judgments about work under conditions of close, high quality parent-child relations (Mortimer and Kumka 1982).

Bourdieu's concept of habitus provides another way of thinking about these empirical associations (Bourdieu 1977). Habitus is a system of relatively stable perceptions, appreciations, and past experiences that provide a sense of the world and one's place in it. It is social structure internalized, developed through ongoing exposure to social conditions. As a result, a person's aspirations, values, and ideas about the future reflect the constraints of social location (MacLeod 2009). Young people from lower socioeconomic status backgrounds live in families and neighborhoods in which adults are concerned about the pay, stability, and respectability of their jobs. Achieving higher education is not a likely outcome and work is first and foremost about material security. Young people from higher socioeconomic status backgrounds more often take earning college degrees for granted, which they believe insures satisfaction of material concerns. The more advantaged youth are exposed to adults whose jobs are both extrinsically and intrinsically rewarding, allowing focus on intrinsic attributes of work and possibly even creating aversion to the use of money or prestige as primary criteria for desirable jobs. Thus, according to this perspective, class patterns in judgments about work are internalizations of the likelihood of higher educational attainment and acquisition of the kinds of jobs that are typical of persons in one's social world.

In addition to socioeconomic background, gender is the focus of a great deal of research on judgments about work. Much scholarship on adolescents frames gender differences as resulting from gender role socialization (e.g., Herzog 1982; Leuptow 1980; Marini et al. 1996). According to that perspective, girls are freer than boys to focus on intrinsic orientations, being less responsible for breadwinning; boys, in contrast, place greater emphasis on income, advancement, and security. Consistent with Bourdieu's concept of habitus, such a pattern would reflect internalization of the types of rewards that are available in sex-typical jobs (e.g. a number of well known female-dominated occupations pay less, but offer greater opportunities to help others). Similarly, Risman(2004) argues that gender

inequality in the rewards of work, as well as cultural schemas about men's and women's family roles and the sex-appropriateness of various job tasks, create ongoing expectations and motivations across the life course.

Empirical evidence that speaks to these potential gender differences is inconsistent, due in part to social change during the period across which studies have been conducted. Two observations capture the basic pattern, however. First, young women rate intrinsic rewards more highly than do young men; second, while young men rated extrinsic rewards more highly than young women before the 1990's, younger cohorts of women are now as extrinsically oriented as are young men (Bridges 1989; Leuptow 1980; Marini et al. 1996; Mortimer et al. 1996).

Less sustained attention has been paid to other aspects of social origin, but a variety of additional factors shape adolescents' judgments about work (Halaby 2003; Johnson 2002). Key among these are race and cognitive ability. Black adolescents attach greater importance to both intrinsic and extrinsic rewards than do whites, controlling parental socioeconomic status (Johnson 2002). Cognitive and academic abilities have also been linked to judgments about work in ways that mirror socioeconomic advantage. Adolescents with higher academic ability place less emphasis on job security (Johnson 2002) and extrinsic rewards more broadly (Anderson 1985), and more emphasis on opportunities for decision making and challenge at work (Johnson 2002).

The well-demonstrated links between social background and judgments about work make it necessary to control social origins in any assessment of the effects of judgments about work on occupational outcomes. However, the contemporary associations between background variables and work orientations are of interest in themselves. The increasing variability in paths to adulthood, which may weaken the impact of family socioeconomic status and other dimensions of social background, make it important to continue to monitor these relationships and their role in the attainment process among contemporary cohorts of youth in transition to adulthood.

### **Judgments about Work and Adult Attainment**

Research on cohorts of young people during the 1950s through the 1970s established that judgments about work shape occupational selection. Because occupational preferences and aspirations are rooted in judgments about work (e.g., Davis 1965; Rosenberg 1957), choices regarding schooling and work reflect these judgments. Judgments about work can thus be considered exemplary of agentic strivings during the transition from school to work. Young people with stronger interests in being challenged and in having authority at work are more likely to invest in postsecondary education, a key route to occupations with those features, whereas those more oriented toward job security and other extrinsic rewards enter the labor market more quickly (Johnson and Elder 2002). Workers also choose between jobs and make later job changes in ways that reflect their work orientations (e.g., Judge and Bretz 1992; Meich and Elder 1996). Partially as a result of these selection processes, workers tend to have jobs with features that are consistent with their earlier orientations; working in jobs that offer greater extrinsic and intrinsic rewards subsequently reinforces these differences (Johnson 2001a; Lindsay and Knox 1984; Mortimer and Lorence 1979).

A serious limitation of existing research on the role of judgments about work in educational and occupational attainment is its restriction to a limited historical era. In fact, the primary evidence stems from cohorts graduating from high school in the early 1960s through the late 1970s. Because the social context in which adolescents plan and work toward their occupational goals has changed rapidly over the past several decades, it is unclear whether judgments about work still matter. Two interrelated aspects of social change may have

important implications for understanding the import of judgments about work for attainment.

First, the structure of the life course is thought to have become increasingly individualized, involving greater freedom to plan one's life irrespective of one's origins and greater variability in life course patterns (Shanahan 2000; Shanahan and Macmillan 2008). Individuals now view the life course as a personal and self-directed project less dictated by family origins and tradition. Whereas scholars argue that these changes stem from modernization, individualization may have intensified in the late 1960s (Shanahan and Macmillan 2008). Brückner and Mayer (2005) tie this trend to multiple phenomena: value changes in the late 1960s and 1970s regarding the importance of individual autonomy and self-realization, women's greater involvement in higher education and careers, the delay of family formation, and structural changes attendant on globalization.

Whereas individualization increases personal choice, it also requires navigation in a more complex environment (Brückner and Mayer 2005; Buchmann 1989). Indeed, Buchmann (1989) challenges the notion that early orientations matter: as the transition to adulthood has become extended and individualized, and as trajectories are less tied to family background and other elements of social origin, outcomes become less predictable. Thus, changes over the past several decades may have made young people's judgments about work increasingly disconnected from their social origins as well as their eventual occupational attainments.

Second, changes in the economy and labor market since the 1970s may have weakened the relationship between judgments about work and later occupational placement. Rapid change in technology, occupations and organizations make it more difficult for adolescents to anticipate future jobs and their features. Although youth's understandings about job conditions are not necessarily accurate, they form their ideas about work within contexts that allow them to observe their parents' and relatives' jobs, the jobs of their friends, their own work experiences, and reports in the media. As adolescents and young adults make myriad decisions that shape their later attainments, they strive towards an increasingly fuzzy and moving target.

In addition to uncertainty stemming from the rapidity of change, specific trends in the organization of work increase uncertainty. According to Fullerton and Wallace (2006), the "flexible turn in U.S. labor relations" encompasses several interrelated changes since the 1970s: organizational restructuring, downsizing, declining unionization, growing use of contingent labor, and general weakening of the "social contract" between employees and employers. Both workers in "bad jobs" (Kalleberg et al. 2000) and highly skilled employees (Skaggs and Leicht 2005) are increasingly in nonstandard employment arrangements with little to no job security. In this context, and with the relative earnings of college degree recipients rising, nearly all adolescents want to earn a BA (Bachman, Johnston and O' Malley 2009; Reynolds et al. 2006; Schneider and Stevenson 1999). Young people are much more likely to obtain high wages in the contemporary U.S. economy if they achieve higher levels of education, particularly, if they become college graduates (Lemieux 2006; NCES 2008). As a result, actual earnings and other job attributes may now depend more on the youth's academic and financial resources than on the kind of work that is desired.

In sum, individualization of the early life course, economic shifts, and especially, the "flexible turn in U.S. labor relations" (Fullerton and Wallace 2006) may have diminished young people's capacity to obtain jobs that are congruent with their early judgments about work. The cohorts studied previously entered the labor force before or just at the start of these economic changes (Fullerton and Wallace 2006) and as individualization is thought to have sped up (Shanahan and Macmillan 2008). Adolescents now form their judgments about

work and make important decisions about education and work in a considerably different context. It is important to note, however, that judgments about work are more abstract than some other future orientations (Johnson and Monserud 2010), as they focus on general job features rather than specific occupations. As a result, they may prove to be good predictors of work outcomes despite rapid social change. By examining the judgments about work of a contemporary cohort, our study can address whether these orientations are still an important part of the attainment process.

### **Data and Measures**

#### Data

We examine longitudinal data from the Youth Development Study, which began in 1988 with a randomly chosen panel of 1,010 ninth grade students enrolled in St. Paul, Minnesota, public high schools. Participants (64% of those invited) completed questionnaires in their classrooms annually between 1988 and 1991. Those who were not present on either of the two administration days, or were no longer attending school, completed questionnaires by mail. Extensive tracking procedures ensured that students who dropped out of school or who moved to another school district were followed. Nearly every year between 1992 and 2005, data were collected by mailed questionnaires. In 1988 and 1991, parents were surveyed by mail. The retention rate through 2005 was 70 percent, which is relatively high for a panel study of this duration (Staff and Mortimer 2007).

This analysis uses data from ninth graders and their parents collected during the base year, 1988, and from follow-ups of the young people in 1995 and 2005 when respondents were age 21-22 and 31-32 years old, respectively. We examine judgments about work at age 21-22 because these ideas may become more salient as young people gain educational and work experience after high school. We examine occupational characteristics at age 31-32, when youth are largely finished with their educations and careers are becoming established. Our initial analyses include 780 respondents who reported their judgments about work in the 1995 survey; analyses of occupational outcomes is limited to the 518 cases reporting employment and occupational characteristics at the time of the 2005 survey.

#### Measures

We measured social origins in 1988, the ninth grade base year. We consider several indicators of family socioeconomic background. *Family income* was measured by the total household income as reported by the father, or if not available from the father, by the mother (1 = less than \$5,000; 13 = \$100,000 or more). Parents' educational attainment, reported by parents, references the most highly educated parent. We represent *parental educational attainment* as a series of dichotomous variables distinguishing at least a four-year college degree, some postsecondary education, and a high school degree or less. Parents also reported on their employment status and occupation. We measured *parents' occupational prestige*, using the highest of mothers' and fathers' scores, based on NORC occupational prestige ratings linked to 1980 census categories (Stevens and Hoisington 1987). When neither parent was employed, these variables were assigned a score of zero and we include a dummy variable indicating that neither parent was employed.

The adolescents reported their *gender*, *race/ethnicity* and self-perceived mental ability. With limited racial/ethnic variation in the panel, we distinguish whites from non-whites. We measure self-perceived mental ability with *academic self-esteem*, a latent variable indicated by adolescents' responses to three questions asking them to rate their intelligence, reading skills, and school ability compared to others their age on a scale from 1 (far below average) to 5 (far above average).1

We measured *judgments about work* in 1995 when respondents were ages 21-22 years old. Respondents rated a number of work features on a scale from 1 (not at all important) to 4 (extremely important), including key indicators of intrinsic and extrinsic work rewards (see Table 1). We treated intrinsic and extrinsic orientations as latent constructs measured by multiple observed indicators. The extrinsic construct tapped the importance of pay, security, time off and advancement opportunities. The intrinsic construct included decision-making authority, having responsibility, using one's skills and abilities, opportunities to learn, contact with people, and opportunities to help others. In addition to these, one reward was allowed to load on both the intrinsic and extrinsic constructs. Model comparisons indicated a large and statistically significant improvement in model fit when "a job people regard highly" loaded on both constructs (compared to loading only on the extrinsic construct). Perhaps this item reflects both the extrinsic reward of esteem, but also the intrinsic reward of doing important, and therefore personally meaningful, work. To test the sensitivity of the findings to this decision, we estimated the structural models without this second loading and when dropping this indicator altogether. The results were similar across specifications.

Educational and occupational attainments were measured in 2005. *Educational attainment* references the highest degree earned, which we converted to years of schooling. We also measured several occupational characteristics, including standard attainment indicators. These include the log of *hourly earnings*, the log of income in the previous two weeks (*biweekly earnings*), and indicators of socio-economic status, *occupational education* and *occupational earnings*, constructed by Frederick (2010). These SEI scores are based on the education and income of workers (men and women combined) in the 1990 U.S. Census occupational classification adapted to 2000 census categories. *Job security* was measured with a single item in which respondents rated how secure their job was from 1 (not at all secure) to 4 (very secure).

Self-direction in work is a latent variable with two indicators: ratings of how much control respondents felt they had over the way they spend their time at work from 1 (almost no control at all) to 5 (complete control) and how much freedom they had to make important decisions about their work from 1 (almost none at all) to 5 (complete freedom). A latent variable with seven indicators taps *intrinsic rewards*. Three items, including the frequency of feeling bored at work or that time is dragging (reversed), frequency of finding the job interesting enough to do more work than the job requires, and frequency of feeling the work is meaningful and important, were rated on five point scales from 1 (never) to 5 (always). For the next three items, respondents were asked how true statements were about their job, with ratings from 1 (not true at all) to 4 (very true): the job provides the chance to learn a lot of new things, a chance to be helpful to others, and that it uses one's skills and abilities. A final item captured how frequently respondents had to think of new ways of doing things or solving problems on their jobs, rated from 1 (never) to 5 (almost always).

### **Analytic Approach**

We estimated structural equation models using Mplus 5.21 (Muthén and Muthén 1999-2007). The conceptual model appears in Figure 1. Although educational attainment is measured in 2005, we place it prior to occupational characteristics as an important control variable. We also do not specify a causal order for educational attainment and judgments

<sup>&</sup>lt;sup>1</sup>The Youth Development Study did not contain an IQ measure of ability. As a self-assessment, the academic self-esteem measure has more potential for endogeneity with judgments about work than would traditional IQ measures. Having measured it seven years prior to judgments about work helps, but does not resolve, this potential problem. Because this scale was derived from the Youth In Transition Project, which also contained ability and achievement tests (Bachman et al. 1967), it is possible to determine its association with those measures of intelligence. For the 10th grade males in that sample, this self-perceived intelligence scale correlated positively with two intelligence tests (r=.24; r=.44), a vocabulary test (r=.51), an arithmetic reasoning test (r=.40) and a reading comprehension test (.40). Correlations among the tests themselves ranged from r=.45 to r=.71.

about work, as the psychological orientations develop over a long period of time and considerable postsecondary educational investments would have already been made by the time judgments about work were measured in 1995 (at age 21-22). Judgments about work are likely both predictive of educational attainment and influenced by it (Johnson and Elder 2002). Since our purpose is not to explicate that relationship further, we correlate the residuals of these constructs and focus on the effects of judgments about work on occupational characteristics. We also present estimates from models with and without educational attainment.

Structural equation modeling is advantageous for our purposes because it provides a means of estimating relationships that directly map onto our conceptual model. Moreover, it enables us to make use of latent variables for some key concepts, including judgments about work. We began by examining a model that excluded educational attainment and the employment outcomes at the far right of the model so that we could assess the influence of social origins on judgments about work without restricting the sample to respondents who were employed in 2005. We then added one occupational outcome at a time to determine which among the seven occupational outcomes we consider are significantly related to earlier judgments about work. We then estimated the full model including those occupational characteristics found to be significantly related to work judgments twice, first excluding educational attainment and then including it. This sequential strategy enables assessment of the extent to which educational attainment is implicated in the relationships between work orientations and outcomes. We restricted cases for analysis to those with valid responses on the dependent variables. Cases missing on the dependent variables are primarily due to nonparticipation in 2005 and/or non-employment. Neither respondent participation in the 2005 survey nor 2005 employment status was significantly related to 1995 judgments about work.

# Results

The descriptive statistics in Table 1 summarize the characteristics of the original sample (first column) and offer a picture of how it compares with those retained in 1995 (second column), and those retained and employed in 2005 (third column). We analyze the 1995 sample to understand the relationship between social origins and judgments about work; we analyze the employed 2005 sample to examine whether judgments about work predict later occupational outcomes. On most dimensions of social origin, little differs across these samples. Average family income rises slightly and parental non-employment drops. There is also some selective attrition in the panel based on gender and race (Staff & Mortimer 2007).

Estimates from our first model, linking social origins to judgments about work, appear in Table 2. The findings indicate that weaker extrinsic orientations and stronger intrinsic orientations are grounded in socioeconomic and cognitive advantage. Young people from more highly educated families hold weaker extrinsic orientations, as do those with higher academic self-esteem. Those from higher income families hold stronger intrinsic orientations. Consistent with analyses of other data sets from recent cohorts, young women in the YDS are as extrinsically oriented as are young men, but they are more intrinsically oriented than are young men. Finally, controlling socioeconomic background, nonwhites are more intrinsically oriented than are whites. Contrary to previous findings, however, non-whites are not significantly more extrinsically oriented.

Given the fairly wide range of occupational outcomes of interest in this study, we examined them one at a time before estimating a more inclusive model (results not shown; available upon request). Judgments about work showed no relationship to hourly earnings and

occupational income. Five other occupational features demonstrated significant relationships to earlier judgments about work and were retained for further analysis.

Estimates from models incorporating all five occupational features appear in Tables 3 and 4, first excluding educational attainment, then including it. Before detailing the effects of judgments about work, we note the associations among the dimensions of judgments about work and educational attainment (see last two rows of Table 4). Intrinsic and extrinsic orientations are positively related to one another, but differ in their relation to educational attainment. Those with more years of schooling are more intrinsically oriented, and slightly less extrinsically oriented, than are their less educated agemates, even after taking into account the indicators of social origin.2

Those with stronger intrinsic orientations in their early 20s worked in jobs in their early 30s that were more intrinsically rewarding, were more self-directed, and with higher occupational education (see Table 3). Interestingly, stronger intrinsic orientations were also related to working in jobs later that were perceived to be more secure, an extrinsic job feature. Adjusting for educational attainment (see Table 4), the effect of intrinsic orientations on intrinsic rewards is slightly attenuated and the effect on occupational education is no longer statistically significant. Thus, those with stronger intrinsic orientations later work in jobs characterized by higher average educational attainments, but that results from the respondents' own greater years of schooling. The effect of intrinsic orientations on self-direction is nearly unaffected and it increases slightly for job security.

Intrinsic rewards were not only predicted by intrinsic orientations, but by extrinsic orientations as well. As shown in Table 3, those with stronger extrinsic orientations in their twenties held less intrinsically rewarding jobs in their early thirties. Controlling for educational attainment weakens this estimate and renders it non-significant, as shown in Table 4.

Those with stronger extrinsic orientations in their 20s earned more in the two weeks prior to the survey (age 31-32) than those with weaker extrinsic orientations, but only after adjusting for educational attainment (see Table 4). Given that *hourly* pay was not related to extrinsic orientations with or without adjusting for educational attainment (and therefore was not included in the final model), higher earnings likely stem from working more hours. To explore this possibility further, we estimated an additional model (not shown) in which we regressed biweekly earnings on total hours worked per week (summed across all current jobs), as well as educational attainment, judgments about work and social origins. The estimated effect of extrinsic orientations on biweekly earnings was reduced and was no longer statistically significant. Young people who are more extrinsically oriented earn more than other young people, but this is largely because they work more hours, not because they work in better paying jobs. No other advantages, in terms of job security, intrinsic rewards, or self-direction, accrued to those with higher extrinsic orientations.3

The effects of social origins on judgments about work are nearly the same as presented earlier with the larger sample, but notably the magnitude of the relationship between family income and intrinsic orientations has diminished (from .03 to .02) and is no longer

<sup>&</sup>lt;sup>2</sup>The bivariate correlations were stronger, and of about the same magnitude in opposite directions (extrinsic with educational attainment r = -.23 [p<.001]; intrinsic with educational attainment r = .21 [p<.001]).

<sup>3</sup>While educational aspirations and expectations have not figured prominently in the literature on judgments about work, the status

<sup>&</sup>lt;sup>2</sup>While educational aspirations and expectations have not figured prominently in the literature on judgments about work, the status attainment framework places primary emphasis on them. In a supplementary model, we included twelfth grade educational expectations along with the indicators of social origin. The magnitude of the estimates of the effects of judgments about work on later occupational characteristics changed only slightly. Educational expectations had a negative effect on extrinsic orientations but showed no significant relationship to intrinsic orientations.

statistically significant. The effects of social origins on educational attainment and occupational characteristics are largely unsurprising. Parents' educational attainment and occupational prestige have significant positive effects on young people's educational attainment, males attained fewer years of education (p<.10), and those with higher self-perceived abilities gained more years of education. Those with higher self-perceived abilities earned more (as did males), assessed their jobs as more self-directed and secure, and worked in occupations with higher average educational attainment; whites held more self-directed jobs than did nonwhites, and worked in occupations with higher average educational attainment. Parents' socioeconomic status indirectly facilitates better jobs via their children's higher educational attainment, but parents' educational attainment had a negative direct effect on job security and parental income had a negative direct effect on occupational education.

### Discussion

In this study we sought to determine the ways judgments about work are linked to social origins and whether they anticipate adult achievements despite rapid social and economic changes. These changes have led commentators to allege that the power of individuals to construct their lives, in ways that produce desired outcomes, has weakened. Our findings affirm that judgments about work predict several key occupational outcomes, and clarify the extent to which they serve as a bridge between social origins and adult attainment. We begin our discussion by focusing on the way in which judgments about work are shaped by key aspects of social origin.

Prior research on judgments about work has focused primarily on socioeconomic status and gender, and we too find that judgments about work constructs are rooted in these factors, along with perceived mental abilities. Classic works in sociology, including Kohn's studies of social class and parental values and Bourdieu's conception of the habitus, led us to expect that intrinsic orientations would be stronger for youth of more advantaged origins, whereas extrinsic orientations would be emphasized by those from less privileged family backgrounds. As judged from the patterns of relationships between social origins and young people's judgments about work, the link appears to be stronger for extrinsic orientations.

Young people from more highly educated families hold weaker extrinsic orientations as expected; they do not hold stronger intrinsic orientations, a departure from previous findings. Family income is positively associated with intrinsic orientations, though this relationship was only significant in the larger 1995 sample. Social class was also much more strongly associated with extrinsic orientations than intrinsic orientations in Kohn and Schooler's classic study (1969), though the association with intrinsic orientations was still evident and statistically significant.

Perhaps cultural change emphasizing fulfillment in work has made intrinsic job features more universally desirable across classes, while young people from more privileged backgrounds are still more free to take extrinsic rewards for granted. Young people from higher socioeconomic status families may assume some floor of material success. Jobs above that floor are desirable in various ways that make differences in pay and other extrinsic rewards take a back seat. For young people from lower socioeconomic status families, in contrast, jobs must be evaluated, at least to some extent, by the pay, respect, and future opportunities they afford. Academic resources operate in a similar way to socioeconomic resources. Specifically, self-perceived mental abilities are negatively related to extrinsic orientations, but unrelated to intrinsic orientations.

Consistent with analyses of the most recent cohorts of young people, we find no gender difference in extrinsic orientations, but that young women are more intrinsically oriented than young men (Bridges 1989; Leuptow 1980; Marini etal. 1996; Mortimer et al. 1996). Contemporary young women have embraced the extrinsic orientations more typical of young men in earlier cohorts while retaining the stronger intrinsic orientations of the young women who came before them. A similar pattern is found with respect to gender convergence in educational and work achievement orientations over a period of time in which young women have maintained stronger family orientations than their male counterparts (Johnson and Mortimer 2000).

Extrinsic orientations, which are stronger among young people with less educated parents and among those who have lower self-perceived mental abilities, are associated with lower educational attainment (p<.001 bivariately; ns after adjusting for social origins). Intrinsic orientations, which do not appear to be as strongly rooted in advantage, are associated with higher educational attainment. Investment in higher education is an important route to obtaining jobs that are more interesting, fulfilling, and challenging—key intrinsic rewards. These values are likely also strengthened or reinforced in college (Johnson and Elder 2002). Those with stronger extrinsic orientations may view work more instrumentally and work more in the years after high school rather than pursuing higher education. Prior research on earlier cohorts found adolescents with stronger orientations toward job security and other extrinsic rewards less likely to attend postsecondary education; actual attendance had mixed effects on orientations toward different sets of extrinsic rewards (Johnson and Elder 2002). A strategy of work investment over education runs counter to higher eventual income attainment, however, since earning postsecondary degrees would enable access to higher paying and more prestigious jobs. Additional research should explore how extrinsic orientations are related to more general ideas about work, as well as to other orientations like individual self-efficacy and delayed gratification.

Our results affirm the continued relevance of judgments about work as predictors of adult occupational achievements for contemporary workers. Today's young people may take more diverse and longer routes to adulthood, and they may face greater choice and uncertainty, but their achievements continue to reflect their earlier orientations in meaningful ways. Extrinsic orientations are positively related to higher earnings, a key extrinsic reward; intrinsic orientations are positively related to holding jobs later with higher occupational education, higher intrinsic rewards and greater self-direction—having control over the way time is spent at work and being able to make important decisions.

The pattern of findings is more complicated than this correspondence between judgments about work and occupational characteristics would suggest, however. Controlling educational attainment and social origins, young people with stronger extrinsic orientations do earn more in their later jobs, but largely because they work more. Their jobs do not pay more per hour. By examining both hourly earnings and biweekly earnings, our findings also help resolvean unacknowledged but important inconsistency in past findings. Whereas most research has found extrinsic orientations linked to higher income, they have used annual or weekly earnings (Mortimer and Lorence 1979; Lindsay and Knox 1984). The one study failing to replicate this pattern examined hourly earnings (Johnson 2001a). Thus, while extrinsically oriented young people obtain higher levels of the reward they seek, they do not necessarily do so by getting better jobs. Perhaps this is tied to work and school strategies in the years in and immediately following high school. If more extrinsically oriented youth are less likely to pursue higher education (Johnson and Elder 2002) and seek the most extrinsically rewarding jobs they can find, they may maximize those rewards, but only in the short-term.

In addition, intrinsic orientations not only predicted higher levels of related rewards in later work, it predicted higher perceived job security as well—an extrinsic reward. "Cross-over effects," in which orientations along one of the two dimensions predict job features classified under the other dimension, have been documented (e.g., Johnson 2001a; Mortimer and Lorence 1979) and make sense given that jobs with higher levels of one type of reward come with a constellation of other features as well. Yet, taking this pattern of findings as a whole, it is clear that there is an attainment advantage unique to hoiding *intrinsic* orientations. It is not strictly the case that holding stronger extrinsic orientations leads to better paying, more prestigious, or more secure jobs in the way that holding stronger intrinsic orientations leads to more intrinsically rewarding jobs.

These results have an important implication. Judgments about work may indeed be thought of as indicating agentic strivings in the transition to adulthood, but with varying degrees of success. Whereas those with stronger intrinsic orientations obtain their goals at higher levels relative to others, they do so by obtaining jobs with the features they seek. Those with extrinsic orientations do not obtain jobs with higher levels of extrinsic rewards, but they achieve higher levels of at least one key extrinsic reward, money, through their greater work investment.

Further research is needed to understand how judgments about work develop in the context of the family; how parents, through role modeling, direct tuition, or other processes, steer their children to thinking about employment and the relative value of rewards that are potentially available in the workplace. Moreover, the present study does not speak to the ways judgments about work come to influence occupational destinations through manifold choices and acts. Probable reciprocal interrelations of judgments about work and higher education deserve greater attention, drawing on data with repeated measures of judgments about work over shorter intervals than we have available here. Youth who evaluate intrinsic rewards highly, such as using their skills and abilities, may choose particular course sequences in high school or majors in college, which enable them to develop their potentials more strongly, thereby equipping themselves for effective performance in more intrinsically rewarding jobs. Earlier judgments about occupational rewards may also come to affect the kinds of paid jobs they seek during high school and college, their applications for internships, and voluntary job changes in the early phases of their careers.

Despite our inability to address these issues, the findings of this study should reassure scholars that judgments about work are still rooted in social origins in much the same way as in the past and remain important to occupational attainment despite rapid changes in the occupational structure, economic turbulence, and increases in non-standard work arrangements. And although contemporary young people may pursue less standardized, individualized pathways to adulthood, their prior work orientations still have demonstrable implications for the work experiences they will have in their future occupational destinations.

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### References

Anderson, Kristine L. College Characteristics and Change in Students' Occupational Values: Socialization in American Colleges. Work and Occupations. 1985; 12:307–328.

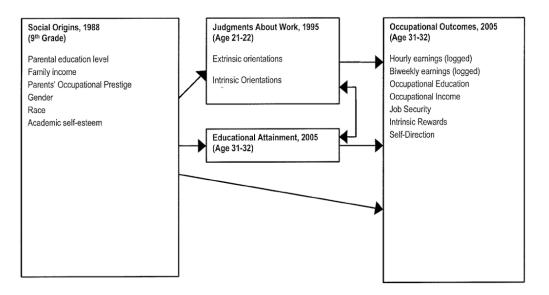
- Arnett, Jeffrey Jensen. Emerging Adulthood: The Winding Road From the Late Teens Through the Twenties. New York: Oxford University Press; 2004.
- Bourdieu, Pierre. Outline of a Theory of Practice. Cambridge: Cambridge University Press; 1977.
- Bachman, Jerald G.; Johnston, Lloyd D.; O'Malley, Patrick M. Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors, 2008. Ann Arbor, MI: Institute for Social Research; 2009.
- Bachman, Jerald G.; Kahn, Robert L.; Mednick, Martha T.; Davidson, Terrence N.; Johnston, Lloyd D. Youth in Transitions: Volume I. Ann Arbor, Michigan: Institute for Social Research; 1967.
- Bridges, Judith S. Sex Differences in Occupational Values. Sex Roles. 1989; 20:205-11.
- Brückner, Hannah; Mayer, Karl U. Destandardization of the Life Course: What it Might Mean? And If It Means Anything, Whether It Actually Took Place?. In: Macmillan, R., editor. Advances in Life Course Research. New York: Elsevier; 2004. p. 27-54.
- Buchmann, Marlis. The Script of Life in Modern Society: Entry into Adulthood in a Changing World. University of Chicago Press; 1989.
- Davis, James A. Undergraduate Career Decisions: Correlates of Occupational Choice. Chicago: Aldine Publishing Company; 1965.
- Elder, Glen H., Jr; Johnson, Monica; Crosnoe, Robert. The Emergence and Development of Life Course Theory. In: Mortimer, Jeylan T.; Shanahan, Michael J., editors. Handbook of the Life Course. Kluwer Academic/Plenum Publishers; 2003. p. 3-22.
- Elder, Glen H., Jr; Shanahan, Michael J. The Life Course and Human Development. In: Damon, William; Lerner, Richard M., editors. Handbook of Child Psychology: Theoretical Models of Human Development. New York: Wiley and Sons; 2006. p. 665-715.
- Frederick, Carl. A Crosswalk for using Pre-2000 Occupational Status and Prestige Codes with Post-2000 Occupation Codes. Center for Demography and Ecology, University of Wisconsin-Madison; Madison, Wl: 2010. Working Paper No. 2010-03
- Fullerton, Andrew S.; Wallace, Michael. Social Science Research. Vol. 36. 2007. Traversing the Flexible Turn: U.S. Workers' Perceptions of Job Security, 1997-2002; p. 201-221.
- Goyette, Kimberly A. College for Some to College for All: Social Background, Occupational Expectations, and Educational Expectations Over Time. Social Science Research. 2008; 37:461–484. [PubMed: 19069055]
- Halaby, Charles N. Where Job Values Come From: Family and Schooling Background, Cognitive Ability, and Gender. American Sociological Review. 2003; 68:251–278.
- Herzberg, Frederick; Mausner, Bernard; Snyderman, Barbara Block. The Motivation to Work. 2. New York: John Wiley and Sons; 1959.
- Herzog, A Regula. High School Seniors' Occupational Plans and Values: Trends in Sex Differences 1976 through 1980. Sociology of Education. 1982; 55:1–13.
- Jencks, Christopher; Perman, Lauri; Rainwater, Lee. What is a Good Job? A New Measure of Labor-Market Success. American Journal of Sociology. 1988; 93:1322–57.
- Johnson, Monica Kirkpatrick. Change in Job Values during the Transition to Adulthood. Work and Occupations. 2001; 28:315–45.
- Johnson, Monica Kirkpatrick. Job Values in the Young Adult Transition: Stability and Change with Age. Social Psychology Quarterly. 2001; 64:297–317.
- Johnson, Monica Kirkpatrick. Social Origins, Adolescent Experiences, and Work Value Trajectories during the Transition to Adulthood. Social Forces. 2002; 80:1307–41.
- Johnson, Monica Kirkpatrick; Elder, Glen H, Jr. Educational Pathways and Work Value Trajectories. Sociological Perspectives. 2002; 45:113–38.
- Johnson, Monica Kirkpatrick; Monserud, Maria. Judgments about Work and the Features of Young Adults' Jobs. Work and Occupations. 2010; 37:194–224. [PubMed: 20802796]

Johnson, Monica Kirkpatrick; Mortimer, Jeylan T. Work-Family Orientations and Attainments in the Early Life Course. In: Parcel, Toby L.; Cornfield, Daniel B., editors. Work and Family: Research Informing Policy. Thousand Oaks, CA: Sage; 2000. p. 215-48.

- Judge, Timothy A.; Bretz, Robert D, Jr. Effects of Work Values on Job Choice Decisions. Journal of Applied Psychology. 1992; 77:261–71.
- Kalleberg, Arne L. Work Values and Job Rewards: A Theory of Job Satisfaction. American Sociological Review. 1977; 42:124–43.
- Kalleberg, Arne L.; Reskin, Barbara F.; Hudson, Ken. Bad Jobs in America: Standard and Nonstandard Employment Relations and Job Quality in the United States. American Sociological Review. 2000; 65:256–78.
- Kerckhoff, Alan C. Ambition and Attainment. A Study of Four Samples of American Boys. Washington, D.C.: ASA Rose Monograph Series; 1974.
- Kerckhoff, Alan C. The Transition from School to Work. In: Mortimer, Jeylan T.; Larson, Reed, editors. The Changing Adolescent Experience: Societal Trends and the Transition to Adulthood. New York: Cambridge University Press; 2002. p. 52-87.
- Kohn, Melvin L. Class and Conformity: A Study in Values. Homewood, IL: Dorsey; 1969.
- Kohn, Melvin L.; Schooler, Carmi. Class, Occupation, and Orientation. American Sociological Review. 1969; 34:659–678. [PubMed: 5357706]
- Lemieux, Thomas. Postsecondary Education and Increased Wage Inequality. American Economic Review. 2006; 96:195–199.
- Leuptow, Lloyd B. Social Change and Sex-Role Change in Adolescent Orientations toward Life, Work and Achievement: 1965-1975. Social Psychology Quarterly. 1980; 43:48–59.
- Lindsay, Paul; Knox, William E. Continuity and Change in Work Values Among Young Adults. American Journal of Sociology. 1984; 89:918–31.
- Loscocco, Karyn A. The Instrumentally Oriented Factory Worker: Myth or Reality? Work and Occupations. 1989; 16:3–25.
- MacLeod, Jay. Ain't No Makin' It: Aspirations and Attainment in a Low-Income Neighborhood. 3. Boulder, CO: Westview Press; 2009.
- Marini, Margaret Mooney; Fan, Pi-Ling; Finley, Erica; Beutel, Ann M. Gender and Job Values. Sociology of Education. 1996; 69:49–65.
- Martin, Jack K.; Tuch, Steven A. Black-White Differences in the Value of Job Rewards Revisited. Social Science Quarterly. 1993; 74:884–901.
- Maslow, Abraham. Motivation and Personality. New York: Harper and Row; 1954.
- Mead, George Herbert. Mind, Self, and Society. Chicago: University of Chicago Press; 1934.
- Miech, Richard Allen; Elder, Glen H, Jr. The Service Ethic and Teaching. Sociology of Education. 1996; 69:237–53.
- Mortimer, Jeylan T. Social Psychological Aspects of Achievement. In: Kerckhoff, Alan C., editor. Generating Social Stratification: Toward a New Research Agenda. Boulder, CO: Westview Press; 1996. p. 17-36.
- Mortimer, Jeylan T.; Kumka, Donald S. A Further Examination of the 'Occupational Linkage Hypothesis'. Sociological Quarterly. 1982; 23:3–16.
- Mortimer, Jeylan T.; Lorence, Jon. Work Experience and Occupational Value Socialization: A Longitudinal Study. American Journal of Sociology. 1979; 84:1361–85.
- Mortimer, Jeylan T.; Pimentel, EE.; Ryu, S.; Nash, K.; Lee, C. Part-Time Work and Occupational Value Formation in Adolescence. Social Forces. 1996; 74:1405–18.
- Muthén, Bengt O.; Muthén, Linda K. Mplus User's Guide. Los Angeles: Muthén & Muthén; 1998-2007.
- National left for Education Statistics. The Condition of Education 2008 (NCES 2008–031), Table20-1. 2008. http://nces.ed.gov/fastfacts/display.asp?id=77 Retrieved 5/18/2010
- Reynolds, John; Stewart, Mike; Sischo, Lacey; McDonald, Ryan. Have Adolescents Become Too Ambitious? High School Seniors' Educational and Occupational Plans, 1976-2000. Social Problems. 2006; 53:186–206.

Risman, Barbara J. Gender as a Social Structure: Theory Wrestling with Activism. Gender and Society. 2004; 18:429–450.

- Rosenberg, Morris. Occupations and Values. New York: Free Press; 1957.
- Schneider, Barbara; Stevenson, David. The Ambitious Generation: America's Teenagers, Motivated But Directionless. New Haven: Yale University Press; 1999.
- Schoon, Ingrid; Silbereisen, Rainer K., editors. Transitions from School to Work: Globalisation, Individualisation, and Patterns of Diversity. New York: Cambridge University Press; 2009.
- Settersten, Richard A. Invitation to the Life Course. Toward New Understandings of Later Life. Amityville, NY: Baywood Publishing Company; 2003.
- Sewell, William H.; Hauser, Robert M. Education, Occupation, and Earnings: Achievement in the Early Career. New York: Academic Press; 1975.
- Shanahan, Michael J. Pathways to Adulthood in Changing Societies: Variability and Mechanisms in Life Course Perspective. Annual Review of Sociology. 2000; 26:667–692.
- Shanahan, Michael J.; Macmillan, Ross. Biography and the Sociological Imagination: Contexts and Contingencies. New York: WW Norton & Co; 2008.
- Skaggs, Bruce C.; Leicht, Kevin T. Management Paradigm Change in the United States: A Professional Autonomy Prospective. Research in the Sociology of Work. 2005; 15:123–149.
- Staff, Jeremy; Mortimer, Jeylan T. Educational and Work Strategies from Adolescence to Early Adulthood: Consequences for Educational Attainment. Social Forces. 2007; 85:1169–1194.
- Stevens, Gillian; Hoisington, Elizabeth. Occupational Prestige and the 1980 U.S. Labor Force. Social Science Research. 1987; 16:74–105.
- Weber, Max. The Theory of Social and Economic Organization. New York: Free Press; 1947.



**Figure 1.** Conceptual Model

Table 1

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Means (standard deviations) for Social Origins Measures

		•	185 CK1	1995 Sample N=700	rdura cooz	2005 Employed Sample 11-510
Social Origins(1988)						
Family income	5.60	(2.49)	5.88	(2.40)	60.9	(2.34)
Parental Educ. Attain.						
Parent some college	.31	(.46)	.31	(.46)	.31	(.46)
Parent college grad+	.26	(.44)	.29	(.46)	.29	(.45)
Parental Occ. Prestige	37.19	(20.62)	39.62	(19.65)	41.49	(17.77)
Neither parent employed	.16	(.36)	.12	(.32)	80:	(.26)
Male (vs. female)	.48	(.50)	.43	(.49)	4.	(.50)
White (vs. non-white)	.73	(.44)	.80	(.40)	.82	(.38)
Academic self-esteem						
Intelligence	3.52	(.73)	3.54	(.73)	3.58	(.72)
Reading skills	3.52	(.85)	3.55	(.85)	3.59	(98.)
School ability	3.38	(92')	3.41	(77.)	3.48	(.73)
Judgments About Work (1995)						
Pay $(E)^3$			3.33	(69.)	3.30	(69)
Time off (E)			2.96	(92.)	2.97	(.75)
Steady work (E)			3.48	(89.)	3.49	(69.)
Advancement (E)			3.40	(.73)	3.40	(.73)
High regard (E & I)			2.58	(56.)	2.57	(.94)
Decision making (I)			3.08	(77.)	3.07	(.76)
Responsibility (I)			2.71	(.80)	2.70	(.81)
Using skills (I)			3.40	(.70)	3.40	(.68)
Learning (I)			3.20	(92')	3.17	(.75)
People (I)			2.86	(66.)	2.82	(86.)
Help others (I)			2.94	(.87)	2.91	(.88)
Attainment (2005)						
Educational Attainment					14.52	(1.86)
Hourly Earnings (log)					2.86	(.82)

Baseline Sample N=1,010	1995 Sample $^I$ N=780 2005 Employed Sample $^2$ N=518	2005 Employe	ed Sample <sup>2</sup> N=518
Biweekly Earnings (log)		7.20	(.70)
Occupational Education		62.84	(22.83)
Occupational Income		32.56	(18.40)
Job Security		2.99	(.85)
Self-direction			
Control		3.55	(1.03)
Decision making freedom		3.53	(.97)
Intrinsic Rewards			
Feeling bored (reversed)		3.55	(.92)
Interesting work		3.50	(.82)
Work meaningful & important		3.60	(96)
Use skills & abilities		3.08	(.81)
Problem solving		3.81	(.98)
Opportunity to learn		2.75	(.87)
Opportunity to help others		2.84	(.92)

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Restricts the sample to those answering the judgment about work items in the 1995 data collection.

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 $<sup>^2</sup>$ Restricts the sample further to those employed and with valid occupational outcome data in 2005.

 $<sup>\</sup>frac{3}{2}$  indicates item loads on the extrinsic construct; I indicates item loads on the intrinsic construct.

 Table 2

 Structural Equation Model of Social Origins and Judgements about Work, Unstandardized Parameters

	Extrinsic Orientations (1995)	Intrinsic Orientations (1995)
Family income	.00 (.01)	.03 (.01)*
Parent some college	10 (.05)*	.04 (.05)
Parent college grad <sup>+</sup>	25 (.06)***	.03 (.06)
Parental occ. prestige	.00 (.00)	.00 (.00)
Neither parent employed	.03 (.09)	.17 (.10)
Male	.02 (.04)	15 (.04)***
White	08 (.05)	13 (.05)*
Academic self-esteem	15 (.04)***	.04 (.05)
Residual for each dependent var.	.17 (.02)***	.25 (.03)***

Note: residuals for extrinsic and intrinsic orientations were correlated. N=780. Chi-Square 433.39 (df=149); CFI=.910; TLI=.886; RMSEA=.049.

<sup>&</sup>lt;sup>+</sup>p < .10;

<sup>\*</sup>p < .05;

p < .01;

<sup>\*\*\*</sup> p < .001

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Structural Equation Model of Social Origins, Judgements about Work, and Occupational Outcomes; Unstandardized Parameters

	Extrinsic Orientations (1995)	Extrinsic Orientations (1995) Intrinsic Orientations (1995)	Intrinsic Rewards (2005) Self-Direction (2005) Occ. Education (2005) Job Security (2005) Biweekly Earnings (2005)	Self-Direction (2005)	Occ. Education (2005)	Job Security (2005)	Biweekly Earnings (2005)
Family income	.00 (.01)	.02 (.02)	01 (.01)	.01 (.02)	-1.12 (.51)*	02 (.02)	01 (.02)
Parent some college	10 (.06)	.03 (.07)	01 (.06)	11 (.10)	2.95 (2.31)	12 (.10)	.11 (.08)
Parent college grad <sup>+</sup>	26 (.07)***	.03 (.08)	10 (.08)	21 (.13)	9.14 (2.91)**	.29 (.12)*	.06 (.10)
Parental Occ. SES	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.13 (.09)	.00 (.00)	.00 (.00)
Neither parent employed	.06 (.12)	.11 (.14)	03 (.13)	.13 (.21)	1.35 (4.74)	24 (.20)	21 (.16)
Male	03 (.05)	16 (.06)**	.03 (.05)	.00 (.08)	-5.50 (1.86)**	06 (.08)	.36 (.06)***
White	11 (.07)	20 (.08)*	.11 (.07)+	.25 (.11)*	5.37 (2.40)*	.09 (.10)	.12 (.08)
Academic self-esteem	16 (.05)**	.02 (.06)	.03 (.05)	.21 (.09)*	13.33 (2.07)***	.16 (.08)+	.26 (.07)***
Extrinsic Orientations			22 (.10)*	.06 (.16)	-3.51 (3.61)	.09 (.15)	.17 (.12)
Intrinsic Orientations			.32 (.08)***	.28 (.12)*	6.92 (2.73)*	.22 (.11)*	.00 (00)
Residual Variance for each Dep. Var.	.17 (.03)***	.26 (.03) ***	.22 (.04)***	.78 (.05)***	383.23 (25.18)***	.68 (.04)***	.42 (.03)***
Correlation among residuals							
Extrinsic Orient.		.51 (.05)***					

Note: residuals for the five occupational outcomes were also correlated. N=518; Chi-Square 745.18 (df=368); CFI=.888; TLI=.855; RMSEA=.044.

\*\* p < .01; \* p < .05;

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Table 4

Structural Equation Model of Social Origins, Judgements about Work, Educational Attainment, and Occupational Outcomes; Unstandardized Parameters

	Extrinsic Orientation (1995)	Intrinsic Orientation (1995)	Educ. Attainment (2005)	Intrinsic Rewards (2005)	Self-Direction (2005)	Occ. Education (2005)	Job Security (2005)	Biweekly Earnings (2005)
Family income	.00 (.01)	.02 (.02)	.01 (.04)	01 (.01)	.01 (.02)	-1.13 (.46)*	02 (.02)	01 (.02)
Parent some college	(90.) 60	.03 (.07)	.36 (.18)*	02 (.06)	10 (.10)	1.75 (2.10)	11 (.10)	.08 (.07)
Parent college grad <sup>+</sup>	26 (.07)***	.04 (.08)	1.12 (.21)***	15 (.08)+	19 (.13)	4.91 (2.67)+	26 (.12)*	04 (.09)
Parental Occ SES	.00 (.00)	.00 (.00)	.02 (.01)**	.00 (.00)	.00 (.00)	.05 (.08)	.00 (.00)	.00 (.00)
Neither parent employed	.06 (.12)	.11 (.14)	.59 (.37)	07 (.13)	.14 (.21)	-1.34 (4.34)	22 (.20)	27 (.15)+
Male	03 (.05)	17 (.06)**	26 (.14)+	.04 (.05)	.00 (.08)	-4.75 (1.70)**	07 (.08)	.37 (.06) ***
White	11 (.07)	*(00)*	16 (.18)	.11 (.07)+	.25 (.11)*	5.77 (2.19)**	.08 (.10)	.13 (.08)+
Academic self-esteem	16 (.05)**	.02 (.06)	1.14 (.16)***	03 (.06)	.23 (.10)*	8.73 (1.97)***	.20 (.09)*	.16 (.07)*
Extrinsic Orientations				16 (.10)	.06 (.16)	1.03 (3.41)	.05 (.15)	.26 (.12)*
Intrinsic Orientations				.26 (.08)**	.29 (.12)*	2.51 (2.60)	.26 (.12)*	.09 (.09)
Educational Attainment				.06 (.02)**	02 (.03)	4.93 (.58)***	04 (.03)	.11 (.02) ***
Residual Variance for each Dep. Var17 (.03) ***	r17 (.03)***	.26 (.03)***	2.30 (.15)***	.21 (.04)***	.78 (.05)***	331.13 (21.03)***	.70 (.04)***	.40 (.03) ***
Correlations among residuals								
Extrinsic Orient.		.51 (.05)***	09 (.06)					
Intrinsic Orient.			.17 (.05)**					

Note: residuals for the five occupational outcomes were also correlated. N=518; Chi-Square 764.98 (df=385); CFI=.897; TLI=.864; RMSEA=.044.